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Strikes, Public Utilities and Government

LABORERS and mechanics of all degrees of skill claim absolute freedom to strike; employers claim equal rights to enforce lock-outs. Where either affect by such action only one of numerous similar industries, the public at large is not seriously affected. But when a natural monopoly is involved, such as coal, happenings within the past few years have emphasized the vital concern of the public in the actions of all parties to the controversy; and the time seems to be almost ripe for the government to declare its power and duty to summarily prevent the interference with public comfort and life resulting from disagreements among the joint producers of public necessities.

But where shall the right and duty cease? A few days ago the street cleaning and ash removing employees serving a section of New York struck for higher wages, and for days the streets were cluttered with barrels, boxes and loose piles of ashes and rubbish; for in congested dis-

tricts space is absolutely unavailable for storing the refuse of even a few days. And imagine the condition if garbage in the city's hotel district went uncollected for a week! Chicago's police have begun to organize and affiliate with the American Federation of Labor, following the example of the firemen. What could be done should these strike and refuse to protect the city?

In the Canadian Parliament there was introduced last week a project of law based on the idea that strikes in all public utilities should be illegal; that differences or complaints should be investigated by public authority, work proceeding meanwhile; the award to be accepted by both parties. The discussion and action of the Parliament on this question will well bear watching and studying on this side of the border. If it becomes a law this will be another step toward—paternalism? socialism? Who can say? The socialism of yesterday is the conservatism of to-morrow, and there are indications that the material advance of the 19th century is to be followed by tremendous social and governmental changes in the present one.

To Foster Trade and City Welfare

PROBABLY no single body of men in any city exerts a greater or more laudable influence upon its welfare, commercial, physical and often sanitary, than those non-official bodies of citizens known as Boards of Trade, Merchants' Associations, and the like. In many cities, especially those which are straining after bigness, their efforts are largely confined to securing the introduction of new commercial and manufacturing enterprises; but even in their efforts in this direction, commendable in themselves, the more fundamental benefits of safety, convenience, sanitation and beauty are striven for as features attractive to outsiders. The motto of the Merchants' Association of New York—"To Foster the Trade and Welfare of New York"—well expresses the general aim of these bodies. And the work this association has performed during the past year may be taken as an illustration of several of the lines along which similar bodies may well exert their influence. Its efforts toward securing better control—or some control—of street openings were referred to in our December 12 number. It has encouraged action toward more complete house numbering; regulation of pushcarts; better fire alarm service; pneumatic tube service for the Post Office; removal of unused car tracks; preventing pollution of the harbor; preventing obstruction of the sidewalks, and other matters of greater or less importance. Such an organization secures for large cities many of the benefits of the New England "town meeting."

GOVERNMENT BY COMMISSION

Kansas Cities Will Ask Legislature to Authorize the Adoption of the Galveston System—General Plan

By SHEFFIELD COWDRICK

THE larger cities of Kansas will ask the Legislature this winter to enact a law authorizing them to adopt the commission system of government. The plan under consideration is based upon the government of Galveston, Texas. The Texas system was thoroughly investigated last fall by a committee sent from Topeka, and a bill embodying the system to be adopted in Kansas is being drafted by a committee of lawyers and business men. Besides Topeka, others of the larger cities of the State, including Wichita and Kansas City, are planning to abolish their City Councils and adopt the commission system.

Under the present city charter act all cities and towns in Kansas are governed by Mayor and Council. In cities of the first class the Council consists of two members from each ward. Each Councilman is elected by the voters of his ward only. The Mayor is elected by the voters of the entire city, as are the City Attorney, City Treasurer, and City Clerk. The City Engineer, License Collector, and all inspectors, as well as the subordinate officials and employes in all departments, are appointed by the Mayor and confirmed by the Council.

This system has proved to be unwieldy and inefficient. Councilmen feel themselves responsible to the voters of their own wards rather than to the city at large. Favors are traded back and forth, each Councilman making alliances with others to get as much as possible for his own ward. To this evil is added that of a superabundance of politics. The city officer, from the beginning to the end of his term, is besieged by a horde of place-hunters, each one demanding recognition for the work he did before the election. Politics is a ruling factor in the appointment of policemen, sanitary officers, and even street laborers and janitors.

It is in the hope of improving these conditions that the cities of Kansas have turned toward the commission system. The idea originated in Topeka. Three months ago a number of business men held a meeting and sent Frank G. Drenning, the City Attorney, and W. S. Bergundthal, a former Mayor, on an investigating trip to Texas. The envoys took ten days for their trip, and upon their return made an exhaustive report. This report was presented at a meeting held on December 6, which was attended by a large number of the principal business men of Topeka, as well as a delegation from the Chamber of Commerce at Wichita. At this meeting committees were elected to draw up a bill and work for its passage by the Legislature.

There are two general forms of commission government in operation in Texas. One is that of Galveston, the other that of Houston. Kansas is considering a plan based upon that of Galveston. This system puts the city government in the hands of a Mayor and four commissioners, each in charge of some department of municipal

administration. One commissioner has charge of the Police and Fire Departments, another the finance and revenues, another the waterworks and sewers, and another the streets and public buildings. All the other city officials and employes are elected by the commission. Each commissioner nominates the appointees in his department, and they are confirmed by the board. In this way each commissioner is made directly responsible for some general division of municipal administration, and is allowed practically to choose the men who are to work under him. The different departments are allotted to the commissioners by vote of the board itself after the election, but it is practically understood in advance which commissioner will be put in charge of each department. In all legislative matters the vote of a majority of the commission is supreme. The Mayor has no veto power.

This is substantially the system which the larger towns of Kansas want to adopt. The bill that is being drawn up at Topeka will make few changes from the Galveston system. Some of the advocates of the commission system, notably Mayor W. H. Davis, of Topeka, want the number of commissioners limited to three, but there is little chance that this plan will be carried out. Most of the men interested in the scheme think a commission of five is preferable.

It is not the intention to make the commission system compulsory upon any city of the State. The bill that is to be introduced in the Legislature will be drawn up so as to provide that any city of the first class may adopt this system by vote of the people at a special election.

Chemical Precipitation at Providence

THE annual report of the City Engineer of Providence, R. I., for 1905, which has just reached us, contains an excellent summary of data relative to sewage purification plant there. According to this, out of a total population of 198,635, 178,000 were served by sewers of which 204 miles were combined and 10 miles storm; the daily amount of sewage averaging 22,707,000 gallons, with a maximum of 55,400,000 gallons and a minimum of 8,300,000. The amount of lime used per million gallons of sewage was 599 pounds and 51.5 pounds of copperas. Of the total albuminoid ammonia 48.2 per cent. was removed, and 86.44 per cent. of that in suspension; 3,040 gallons of sludge were produced per million gallons of sewage treated, containing 7.89 per cent. of solids; this was pressed into cakes and hauled by steam train to a dump one-eighth mile away. The effluent is discharged in the Providence river under 36 feet of water. The cost of treatment per million gallons was \$3.13 for the chemical precipitation and \$2.66 for the sludge disposal. In pressing the sludge 24.87 pounds of lime were added per 1,000 gallons of sewage to "cut the slime." The sludge was first pumped by Shone ejectors to storage reservoirs; thence by gravity forcing receivers, which forced it into the presses under 60 to 80 pounds pressure per square inch. Eighteen filter presses were used, each with 43 to 54 plates. These produced daily 85.7 tons of cake, containing 26 per cent. of solids.

INCINERATOR AND LIGHTING PLANT

New York City Has Most Successful One in Operation in This Country—Official Test of Efficiency

ATTENTION of municipal officials generally throughout the country has been attracted to the operations of the incinerator and power plant of New York City, which is recognized as the most successful ever installed in America. This interest has been enhanced recently as the result of a test made under direction of George Francis Seaver, Professor of Electrical Engineering of Columbia College, and Mr. F. L. Stearns, C. E., of the Department of Street Cleaning. The plant, the installation of which was described in the MUNICIPAL JOURNAL AND ENGINEER of May 2, page 402, furnishes steam to the Department of Bridges, which, in an adjoining building, operates engines and direct-connected generators for furnishing electric current for the lights of the Williamsburg bridge.

The test extended over a period of six hours, during which official readings were taken and calculations made, as follows:

Refuse burned.....	40,497 lbs.
Refuse burned per hour.....	6,749 lbs.
Yards burned.....	.293
Weight, per yard.....	138 lbs.
Cubic yards burned per hour.....	.48
Grate area.....	192½ sq. ft.
Burned per square foot of grate per hour.....	.39.2
Total ash.....	6,070 lbs.
Percentage of ash to amount burned.....	14.9%
Heating surface of boiler.....	3,780 sq. ft.
Water evaporated per hour from and at 212° F.....	15,458 lbs.
Horsepower per hour.....	455
Refuse burned per boiler horsepower.....	14.8 lbs.
Water evaporated from and at 212° per lb. of refuse.....	.229 lbs.
Steam pressure.....	.143 lbs.
Total heat derived from refuse in B.T.U.....	89,300,000
Average voltage.....	.253
Average amperes.....	.579
Rubbish burned per kilowatt hour.....	.46 lbs.

As compared with estimates that had been made, based on the experience of the Street Cleaning Department with the Forty-seventh street incinerator, the amount of water evaporated per pound of rubbish is notable. One and a half pounds of water per pound was the evaporative capacity of the rubbish, and the high percentage obtained here is attributed to the work of the economizer which heats the feed water to a high degree of temperature. The amount of rubbish burned per square foot of grate area, 39.2 pounds, is less than the maximum estimate of 60 pounds. The amount of refuse burned per boiler horsepower developed 14.8 pounds, seems very moderate for this class of work. The rubbish burned per kilowatt-hour, as shown on the face of the report, .46 pounds, is explained by the fact that the boilers were run to their full capacity, 455 horsepower being developed, whereas not all of the power was used in generating current. While the power plant is designed to operate from the combustion of refuse, the boilers are provided with coal-burning grates, which are used whenever the amount of refuse is insufficient.

Water Meters in Washington

In the annual report of the Commissioners of the District of Columbia, submitted to Congress this month, extended reference is made to the work of installing meters in the District, and its effect upon consumption. An appropriation of \$100,000 was made for the present fiscal year for the purchase and installation of water meters, "to be placed in such private residences as might be directed by the Commissioners, the meters to remain the property of the District." The cost is to be repaid from water revenues at the rate of \$20,000 per year, beginning with the fiscal year ending June 30, 1908.

"This action of Congress established the policy of installing meters in private residences; but at the rate at which the appropriation was made it will be from five to seven years before all such residences will be supplied with meters, as the cost will be from \$500,000 to \$750,000. A contract has been let for furnishing these meters and a force organized to install them. The Commissioners are in receipt of numerous requests from citizens to have the meters installed, and it is their intention to comply with all such requests as far as practicable and, in addition, to select a portion of the city in which to begin the installation. About 4,000 such meters will be installed this year.

"It is required by law that all large consumers shall place water meters in their premises at their own expense. Such large consumers are determined to be those where the water rent amounts to over \$25 per annum. Two thousand four hundred and one water meters of various sizes and kinds are now in use in the District, which is an increase of 297 over the previous year.

"The advantage of installing meters in private residences was demonstrated by experience during the year in installing such meters in squares 234, 235 and 236. A test made of these squares prior to the installation of the meters showed an average daily consumption and waste of about 830 gallons in each premises. Under the meter system this has been decreased 30 per cent., and at the end of the year the consumption showed an average of about 573 gallons for each premises. This consumption will probably decrease about 10 per cent. more, as the use of water during the first three months was excessive and will be reduced by reason of the fact that the users will understand that they are charged for all water unnecessarily used."

Ohio Manufactures in 1905 and 1900

During the year 1905 there was manufactured in the State of Ohio, according to the latest bulletin of the Census Bureau, 522,199 tons of sewer pipe, valued at \$2,939,772, as against 466,469 tons in 1900, valued at \$1,680,724. Electrical conduits were manufactured last year to the value of \$167,200, and in 1900 of \$315,305. In 1905 21,846,000 vitrified paving brick were manufactured, valued at \$200,846, and in 1900 26,853,000, valued at \$208,924. Sewer pipe, according to this, increased in value from \$3.60 to \$5.63 per ton in the five years, and paving brick from \$7.78 to \$9.19 per thousand.

MUNICIPAL NEWS

ALABAMA, Montgomery.—Code Commissioner Mayfield has made a report to the Governor in which he recommends the passage of a **Municipal Bill** which he has prepared. This bill is believed to be in accordance with the wishes of the officials of a number of cities who have recently been discussing the question. Cities and towns are to be divided into four classes, according to population, as follows: First class, 25,000 and over; second class, 2,000 to 25,000; third class, 100 to 2,000; fourth class, unincorporated villages of less than 100 population. The question of incorporation into a town is to be left to a vote at an election to be held within thirty days from the date of an ordinance; this ordinance is to be passed at the request of 500 citizens in places large enough to be in the first class, of 100 for the second, and of 50 for the third. Elections are to be held biennially in May. City Councils of cities of the first class would consist of seven Councilmen-at-large and one from each ward. Councils of cities of the second class would consist of the Mayor and two Councilmen from each ward. In towns of the third class the Council would include the Mayor and six Councilmen.

ARIZONA, Phoenix.—A former Alderman, during his term of office, became so versed in **Waterworks** lore that on retiring and resuming his occupation of developing suburban property he designed and built in his latest division a complete waterworks. A six-inch well was sunk sixty feet, although water was struck at a depth of twenty-three feet. From this well the water is elevated to a 5,000-gallon tank, from which it is distributed to consumers through inch-and-a-half mains.

CALIFORNIA, Marysville.—At a meeting of the Woman's **Civic Improvement Club**, Mrs. Mary Flannery presiding, it was decided to outline the various parks within the limits of the city with young trees, as a preliminary step toward their substantial and permanent improvement. Trees will also be planted on Fifth Street, the main entrance for the new electric road.

Los Angeles.—The city has dedicated a tract of land 300 x 300 feet in Solano avenue, nearly opposite the Solano avenue school, to the **Playground Commission**, to be used as another public playground. Both the Eighth street site and the Solano avenue site are now at the disposal of the commission. The children will be able to take possession just as soon as enough money has been raised to equip either or both with the necessary gymnastic apparatus.

San Francisco.—Superintendent McLaren, of the Park Department, reports that the work of restoration of Golden Gate **Park** is progressing satisfactorily, and that the work will be completed by the new year. Already the work on the Spreckels music stand, the children's playgrounds, the memorial museum, and the hospital is nearly completed. A mammoth land turtle and several smaller members of the species have been received from the Galapagos Islands. They were presented by an expedition sent out by the Academy of Sciences.

Vallejo.—The city of Vallejo, which is already the owner of a half-million-dollar **Waterworks**, will spend \$10,000 more, in conjunction with the government appropriation of \$15,000, to lay an additional submarine main to the Mare Island Navy Yard. The Government purchased \$25,000 worth of water from the city for which it pays 18 cents per thousand gallons.

COLORADO, Colorado Springs.—The question of what acts are necessary to establish the **Grade** of a **Street** has arisen from the Mayor's veto of a resolution of Council establishing a grade for Huerfano Street. The City Attorney expresses the opinion that as a resolution to establish a grade is not an act calling for the expenditure of money, and therefore is not subject to the Mayor's veto power, Mayor Hall believes that grades should be established by ordinance, although the practice for years has been to establish grades by a resolution in conformity with an ordinance passed in 1886. Explaining the matter further City Attorney Robinson says that according to the general rule the legislative power of the Council must be exercised by ordinance and the executive power by resolution.

CONNECTICUT, New Haven.—Mayor Studley favors a **Bond Issue** and at a recent meeting of the special Aldermanic Committee gave a statement of the financial conditions of the city, showing that in the past five years after paying all regular expenses, building three new schools, three engine houses, one police precinct station, a public bath-house, the Broadway pavement, the Kimberly avenue bridge, adding thirty-six men to the Fire Department, and issuing \$100,000 in sewer bonds, the debt of the city has been reduced \$400,000. With this saving, the Mayor stated, the city is justified in paying out \$272,000 for needed improvements and the beautifying of the city.

DISTRICT OF COLUMBIA.—The city has laid very little new **Pavement** this year owing to the refusal of contractors to bid for asphalt paving work within the limit of the cost (\$1.65) set by Congress. If this situation continues the alternatives seem to be to lay the old pavement under a new plan or to lay some new kind of pavement. A municipal asphalt plant, it is thought, would be one way of solving the difficulty. This would be feasible, as there is an abundance of skilled labor and supervision to be had within the city. As regards the choice of a new pavement, the experimental wooden block pavements now being laid under the direction of Gen. George H. Harries, Vice-President and General Manager of the Washington Railway and Electric Company, will be watched with interest. The railway will try a stretch of creosoted wooden blocks on Four-and-a-half street, south of Virginia avenue.

FLORIDA, Pensacola.—At a meeting of the Board of Public Works a resolution was passed stating that, inasmuch as the Board is prohibited from placing **Garbage** outside the city, in the city, and in the clay-pit, that it had no place to place this garbage, and recommends the appropriation of a sum sufficient to provide a crematory of a capacity large enough to dispose of the garbage of the city in a sanitary and acceptable manner.

GEORGIA, Augusta.—An ordinance has been passed making it unlawful to lay any kind of **Sidewalk** other than cement within the fire limits of the city, and prescribing the specifications according to which the sidewalk shall be laid under the direction of the Commissioner of Public Works. In case of violation of the ordinance the offender, if convicted, shall be made to pay from \$5 to \$25 fine or to serve from ten to fifty days on public works.

Crawfordville.—Early next year the city will be shining forth with brilliance, as a fifty-candlepower **Acetylene** gas light will be posted at every street corner. This was made possible by the passing of a bonding act by a vote of 70 to 4.

ILLINOIS, Chicago.—It is believed that Chicago's **Traction Troubles** are over insofar as they are caused by a disagreement between the city and the traction companies. According to the terms of the agreement, the companies will at once invest about \$40,000,000 in improving their properties. The city, on its side, will have an option to purchase at \$50,000,000 on the lines as they stand now, plus cost and ten per cent. on future improvements, on notice of intention to buy to be given on the first of any year and to become effective in six months. Besides this, the city is to have 55 per cent. of the net earnings of the system.

Joliet.—The Health Commissioner, desiring to have an opinion on the quality of the city **Water**, sent samples to the University of Illinois and received the following report: "Color, muddy; total residue on evaporation, 2,345; chlorine in chlorides, 12.0; oxygen consumed, 2.3; nitrogen as free ammonia, .032; nitrogen as alluminoid ammonia, .96; nitrogen as nitrites, .015; nitrogen as nitrates, .080; alkalinity, 614.5." Now he wants to know whether the water is good to drink.

La Salle.—Prof. Edward Barton, of the University of Illinois, Director of the State Water Survey, recently delivered a lecture on the **Water Problems** of Indiana, with special reference to the local condition. The water supply of La Salle was pronounced as excellent and the lecturer presented proof that the city supply was not derived from the Illinois river, but came from underground sources.

Moline.—The National Humane Association has offered the city a fine **Drinking Fountain** providing the city agrees to keep it in repair. A rich member of the society who died recently bequeathed a large amount to be devoted to the building of fountains whereat people, horses and dogs might drink. These fountains are now being placed in many towns. They are quite ornamental, being made of bronze and iron; stand six and a half feet high, are heavily built and cost \$1,000 apiece.

Greenwood.—An indignation meeting was recently held to protest against the dilatoriness of the Citizens' Water and Light Company in improving the **Water Supply**. The facts were developed that the Board of Trustees had arranged terms for a new franchise and that the company had so far failed to accept them. The condition of the franchise offered was that the company should supply the city and citizens with water equal in quality to what is known as second strata water. The quantity of the supply is insufficient, for at a recent fire when the initial pressure was 70 pounds the pressure dropped so that a stream would not break a window pane twenty feet away.

INDIANA, Evansville.—Fire Chief Dunlevy has called attention to the **Blocking of the Streets** in the theater districts by automobiles and carriages between the hours of ten and eleven o'clock at night. The portion of the street not occupied with private vehicles is blocked by street cars so that on a recent occasion the Chief's buggy was held in the blockade five minutes. There is no danger of a fatality from the apparatus coming upon the crowd unexpectedly, besides the damage likely to be caused by delay.

Vincennes.—It seems probable now that a **Soldiers' Monument** will be erected in Harrison Park. The city has several cannon presented by Congress that could be mounted about the base. The G. A. R. had \$500 on hand available for the purpose and the Board of Works has offered to give \$1,000 if a few hundred dollars more can be obtained by popular subscription.

IOWA, Maquoketa.—The citizens strongly indorsed the Davenport-Dubuque **Interurban Railway** project

at a public meeting and subscribed for \$3,000 of the stock of the company. Citizens of Andrew, seven miles north, are adopting the same method of inducing the railroad to run through their town.

KANSAS, Wichita.—Mr. J. W. Purdy, of Pittsburg, Pa., in behalf of the **Water Company**, in which he is the largest stockholder, has made the following alternative propositions to the city:

"Proposal No. 1.—Disinterested appraisers to be appointed, one by the city, one by the water company, these two to appoint the third appraiser; appraisers to be disinterested experts. Appraisers to value the plant and properties of the water company and consider all elements of value except future franchise value, the same to be excluded; bonded indebtedness not to be considered. If property is purchased to be turned over free of debt. This option to remain in effect one year from date of appraisement.

"Proposal No. 2.—Water company to continue to own and operate property and to be entitled to earn its legitimate operating expenses, repairs and taxes, then 8 per cent. per annum upon the value of the property as determined by the appraisers and 2 per cent. additional for depreciation, all above those amounts to be returned to the city. Statement of earnings and expenses to be rendered semi-annually by the water company and to be verified by auditor appointed by the city."

KENTUCKY, Louisville.—According to a report of City Live Stock Inspector Dr. S. A. Bradley and Dr. Frank T. Eisenman, State Veterinarian, the condition of Louisville's **Dairies** is alarming. As photographs were taken during the inspection, a record was made of conditions that cannot be disputed. The recommendations made are a complete renovation of the stables, a prompt cessation of the feeding of distillery waste and the establishment of more sanitary means of drainage. The principal trouble comes from the use of brewery waste. Regarding this custom the dairymen say they cannot feed otherwise and make a profit under existing conditions. Some of them receive only 16 cents per gallon for their milk; for 30 cents per gallon they say they could feed hay and grain.

Paducah.—A **Conduit** owned by the city and leased to the telephone, telegraph and electric-lighting companies is a favorable plan which Mayor Yerser will suggest to the City Council. In the meantime the city will derive an annual revenue of \$2, as rental, for each pole used for wires by telephone or telegraph companies. The ordinance which provides for this rental charge is similar to one in force in Memphis, and has been approved by the decisions of the highest courts. The belief is that the number of poles in residence sections will be reduced by half and that conduits will be found cheaper downtown.

LOUISIANA, New Orleans.—It was proposed to pass a **Wide Tire** ordinance requiring all vehicles to be provided with 5-inch tires when carrying loads of from 4,500 to 8,000 pounds. The draymen considered that this would be a hardship for them because a wagon with a 5-inch tire is difficult to pull on the unpaved streets in the soft soil of New Orleans. A compromise was made on an ordinance requiring 4-inch tires after September next. The general sentiment as expressed at the meeting was that the only way to protect the paved streets was to build more of them. This would distribute the traffic and would overcome the objection to the use of wide tires on soft ground.

MAINE, Calais.—City Marshal Crossman has declared war on **Slot Machines** and says that after proper notice to the lessees of these machines he will make a round trip with a wagon and collect all he finds. Complaints have been made by children and adults, and after a thorough investigation the Marshal has come to the conclusion that the player has little chance to win.

Portland.—Complaints about **Slippery** condition of **Sidewalks** have been frequent and it is said that Christmas shopping has been seriously interfered with. Commissioner of Public Works Ferald has sent a street department gang to sprinkle sand on all the walks. Besides this, the department is ready to supply every household with sand delivered in bags for sprinkling on the icy walks.

MARYLAND, Baltimore.—Mayor E. Clay Timanus has approved an ordinance "to promote the **Public Health** by prescribing the manner in which water liable to breed mosquitoes shall be cared for within the limits of the city." The measure provides for the use of screens over vessels of standing water, for stocking ponds with mosquito-destroying fish or keeping the surface covered with oil; for the prevention of standing water by proper drainage and a number of other provisions to the same effect.

Easton.—The Mayor and Council of the town, which has about 3,500 inhabitants, are desirous of obtaining a **Lighting System** and would consider applications for a franchise for acetylene or electric lighting and are prepared to grant a long-term franchise for lighting the streets. At the present time there is an oil gas plant in the city and a Westinghouse electric plant. Gas is sold for \$1.50 and \$2 a thousand for fuel and illuminating purposes respectively. Electric lights are furnished at flat rates and no meters are in use.

MASSACHUSETTS, Springfield.—At a mass meeting to consider the advisability of reclaiming the river front it was announced that at his death Everett H. Barney would leave his estate, valued at over \$1,000,000, to the city of Springfield. The money will be used to carry out plans for a **River Front Park** and a boulevard of several miles. Mr. Barney is sole owner of the Barney & Berry skate factory and has no near relatives. He is 71 years old.

Taunton.—For the purpose of protecting the city's **Water Supply** land bordering on the shore of Assawampsett pond has been purchased by Engineer Hammond, of the Taunton Pumping Station, acting for the city. Assawampsett pond is the largest body of fresh water in the State. It is a leading summer resort, and quarrels have been frequent on account of the restrictions placed on the cottagers since Taunton began to take water from the lakes. There is much hostility to these regulations which were imposed by the State health authorities, and the whole question of troubles and inconveniences has again been brought forward by the buying of land.

Waltham.—Among the **Municipal Improvements** of the year are a Manual Training School building which is considered a model of its kind. It is of a mill type of construction, is well lighted and equipped. Other improvements have been the construction of a sewer to Roberts' Mills to protect the water supply and a sewer from the Crescent park district which crosses an arm of the river where a centrifugal electric pump will be installed to lift the sewage from a well, a distance of 35 feet, into the main sewer.

MICHIGAN, Grand Rapids.—General Manager Freshney, of the Board of Public Works, has presented his **Annual Report** covering the waterworks, electric-lighting plant and the engineering department. Perhaps the most interesting thing about the report is the comparison of the cost of lighting the city under public ownership and the cost when light was bought from a private corporation. The city paid a private corporation \$97 per light per year. Now the total cost per lamp, according to Mr. Freshney, is but \$58.42, which

shows a saving of \$38.58. Mr. Freshney figures out the cost of the present lights carefully, as follows: Maintenance and operation, \$32.56; loss to the city through non-taxation, \$3.26; depreciation, \$11; bond interest, \$6.88; interest on the balance of the investment which was raised through general taxation. The remainder of the report shows an inventory of all the property controlled by the Board of Public Works to date. The book value of the total is figured at \$1,740,925. Depreciation brings the sum total down to \$1,297,823.

Marquette.—The Municipal Light and Power Commission will extend its **Hydro-Electric Plant** on the Dead river by building a new generating station, concrete dam, flume and equipment at a cost of \$97,000. The projected plant will develop 1,500 horsepower and will be capable of being developed to 4,500 horsepower by the addition of more units. Additional power is badly needed and the fact that \$20,000 has been earned by the old plant over and above all expenses is the inducement which justifies the new undertaking.

MINNESOTA, Duluth.—Some municipal statistician of inquiring mind has figured out that practically every citizen of Duluth is a law breaker under a strict interpretation of the **Ordinances**. Among the ordinances frequently broken are the following: anti-spitting; waste paper; allowing animals to run at large; leaving horse unhitched; riding bicycles on sidewalk; building ordinance; concealed weapons; curfew; muzzling dogs; speed ordinance; gambling; injuring public library books; injuring trees; obstructing sidewalk; use of hose on lawns and sidewalk; cleaning ice from sidewalk; smoke ordinance; coasting; obstructions on streets.

MISSISSIPPI, Columbus.—The City Council has decided to open Main street by the purchase of property so as to make a **Thoroughfare** from the river to the eastern boundary line. For the crossings of this street Mayor Gunter has recommended cement blocks.

MISSOURI, Kansas City.—The city now has 500 **Street Lamps** burning natural gas. The new gas is regarded as much better than the artificial gas for street lights when used with mantels. Recognizing the superiority of gas over electricity for lighting the residence streets, the Council is giving the gas lamps preference over the electric arc lights, except at business corners. Each of the gas lamps now set will cost \$9 a year, or \$3 less than when artificial gas was used.

NEBRASKA, Omaha.—The Water Board has voted to rescind the action of the City Council taken in 1903 providing for the purchase of the Omaha **Water Company's Plant**, and named a committee to procure plans and estimates for a new plant to be built by the city, which it is believed will cost about \$4,000,000.

NEW HAMPSHIRE, Dover.—Mayor-elect White is strongly in favor of the plan of burning the **Street Lights** all night. The present lighting contract does not expire until 1907, but it contains a clause giving the city the option to change to an all-night service at a fixed price. It is understood that the gas company is willing to quote an even lower price.

NEW JERSEY, Jersey City.—Mr. Carl Bannwart, Secretary of the **Shade Tree Commission**, of Newark, delivered an address before the Jersey City Board of Trade in which he reviewed the work of the Commission. He said that 40.7 miles of streets had been planted with trees on both sides. Altogether 4,997 trees have been planted. During the past year the cost has been \$1.98 per tree, although the average price for the three years is \$2.78.

Newark.—The new Municipal Building was dedicated on December 20 with impressive and fitting ceremonies. President James E. Howell of the Building Commission opened the ceremonies with a speech in which he told the history of the work on the first City Hall Newark has ever owned. The building was begun in the fall of 1902, under the direction of J. W. and W. C. Ely, of Newark, assisted by Mowbray and Uffinger, of New York City, and Prof. F. W. Chandler, of Boston, Mass. The building cost two and a half million dollars. Mayor Doremus accepted the building in behalf of the city. Mayor-elect Haussling spoke of the Newark of the future. An inspection of the building was made by the members of the city government and 1,600 invited guests. In the afternoon a banquet was spread at the Krueger Auditorium.

Trenton.—The Board of Aldermen has authorized a special committee to compel the Public Service Corporation to give the citizens of Trenton a better quality of **Gas** than they are now receiving. Three years ago the Public Service Corporation abandoned its local gas plant and has since piped gas from Camden, a distance of 35 miles.

NEW YORK, Elmira.—Four million dollars' worth of **Building** has been done this year or is still under way—a remarkable record for a city of 40,000. Besides many dwellings built, the following manufacturing plants have been extended: Elmira Water, Light and Railway Company, various improvements, at a cost of \$900,000; the American La-France Fire Engine Company, extension of plant, \$200,000; American Bridge Company, \$750,000; Bennett Incinerating Company, \$20,000; Kennedy Valve Company, \$500,000.

New York.—Water Register Padden reports that \$5,097,734.14 was received in **Water Rents** for eleven months ended November 30, an increase of \$481,953.11. This was the largest increase in the history of the bureau. He says that 8,000 more meters were installed and that the work of inspecting the buildings will go on until every unmetered pipe in New York has been discovered and a meter ordered put on. The Interborough Rapid Transit Company is the largest individual user of water in the city, its annual bill aggregating \$150,000. The Waldorf-Astoria Hotel is next, with an annual bill of between \$35,000 and \$40,000. The Register expects to collect even larger sums in penalties from harbor craft when he gets his new patrol boat, funds for which were recently voted.

The Municipal Art Society recently gave a dinner at which city officials and others interested in **Municipal Art** were present. Comptroller Metz spoke of the beauty of the De Witt School buildings recently completed at a cost of \$1,500,000. Mr. Frederic Crowninshield suggested a course of lectures, with slides. "Show the people the pictures of the best bridges and public buildings in the world," he said, "and in this way you can cultivate the public taste for improvement and in the love of the beautiful."

Tonawanda.—According to the recommendation of George W. Booth, engineer for the National Board of Fire Underwriters, the **Water Systems** of the cities of Tonawanda and North Tonawanda are to be siamesed. The engineer's report says: "There is a possibility of failure of supply in any direct pumping system, and especially so when the plant is housed in a non-fireproof station and supply is liable to interruption on account of anchor ice. This possibility, and the fact that practically entire dependence is placed upon the works to furnish direct hydrant streams, without the use of fire engines, in both these cities, making it only prudent to adopt every possible safeguard."

NORTH CAROLINA, Wilmington.—A Franchise has been granted to the Consolidated Company to double track the greater portion of the city line and to extend new lines to the southern and eastern ends of the city. The railway company agreed to contribute \$3,000 towards building a retaining wall on one of the streets over which the line runs and gave bond to restore streets to a good condition and to maintain the surface of the street between the tracks and for one foot outside.

NORTH DAKOTA, Fargo.—At a special meeting of the new **Water Commission** at the Mayor's office, Prof. E. F. Ladd, of the Government Experiment Station, stated that the Red river water, properly filtered, would contain a smaller proportion of solids than the artesian water, and if first-class filtration could be assured the river water filtered would be the best; but the filtration plant would have to be first-class and a filtration expert would have to look after the plant constantly and see that the filter was properly cleaned as often as necessary, or extraneous matters would enter into the water and render it impure. The best filtered water, however, would not be altogether free from disease germs, though the mud in the river water is the substance in which most of the disease germs, such as typhoid, germinate.

OHIO, Cincinnati.—The **City Club** of Cincinnati is the name of a new organization formed to promote good government in the municipality. The present intention of the club is to meet at luncheon every Saturday and discuss local matters of public interest. The sole requirements for eligibility to membership are a belief in the separation of municipal government from State and Federal politics, as well as a willingness to pay for the lunch. No fees are required.

Columbus.—The plan for **Lighting** the Central Market district was taken up at a recent meeting. Already a double electric arch is nearing completion at Town and Fourth streets, and it was decided to erect three single arches on Town street, between Fourth and High. One of these will be at Third and Town, a second, half way between Third and High, and the third half way between Third and Fourth. The work on these will be started shortly and will be rushed to completion.

OREGON, Portland.—The street car system of the Portland Railway, Light and Power Company is almost torn up as a result of a **Strike** over the wages of conductors and motormen. The police have made over fifty arrests but seem powerless to control the mob.

SOUTH DAKOTA, Deadwood.—Unless something unexpected happens, the **Paving** of streets will begin next spring. This is in the face of an apparently unfavorable decision in an injunction case involving paving legislation begun last year when the proceedings were informal. Entirely new legislation will be begun and care will be taken to avoid technical errors.

PENNSYLVANIA, Scranton.—Fifty-four new cases of **Typhoid Fever** were reported in a single day, making three hundred cases since the first of December. According to the reports of City Bacteriologist F. F. Arndt, tests which he has made and which have been confirmed by the State Bacteriologist, are negative so far as showing the presence of typhoid bacillus in the water. From inspection of a map kept at the Bureau of Health, showing the location of every case and the source of the water used in different sections of the city, Dr. Arndt believes that the water supply from the Elmhurst dam is responsible for the epidemic. This supply has been shut off, the mains flushed and people ordered to boil water before drinking.

Wilkes-Barre.—The Water Committee and City Solicitor McHugh have spent nearly a week inspecting a proposed new source of **Water Supply**. The proposed water shed belongs to Colonel Bruce Ricketts and is located in Wyoming county, 2,200 feet above Wilkes-Barre. Colonel Ricketts has three artificial lakes at this point, one containing 315 acres, with an average depth of 12 feet; one of 109 acres, with an average depth of 20 feet, and one of 50 acres, with a depth of 10 feet. All the water in this shed has been diverted into these three basins, assuring an ample storage supply for dry seasons, and as all it has to do is to run downhill to reach the Wyoming Valley towns, Wilkes-Barre included, the Water Committee are inclined to regard Colonel Ricketts' Wyoming watershed as an ideal source of supply.

RHODE ISLAND, East Providence.—Feeling that the situation regarding the spread of **Rabies** was serious enough to warrant immediate attention, the East Providence Business Men's Association unanimously passed a resolution urging the Town Council to take action regarding the restriction of the liberties allowed dogs and that pending the action of the Council the Health Officer should see to it that the greatest precaution was taken to guard the safety of the citizens. Drs. J. B. McKenna, J. M. Moore and Simeon Hunt were appointed a committee to look after the matter.

SOUTH CAROLINA, Anderson.—Chief Smith of the **Fire Department** received the charter for the Anderson Firemen's Benevolent Association and now the department may be placed in the list of the fire companies of the State that have complied with the new law and will receive benefits of firemen's insurance.

SOUTH DAKOTA, Vermillion.—Professor Todd, formerly State Geologist, warns the public that its **Artesian Basin** may run dry. A decided decline in pressure and volume has appeared in most places where many wells have been made, and this decline is approximately proportioned to the age of the wells. Often the decline may be attributed to the failure of casing, choking or underground leakage, but it is a fact that new wells fall far short in capacity as compared with similar wells made fifteen or twenty years ago. Regarding measures tending to conserve the supply, Prof. Todd says that all wells flowing into rivers or otherwise going to waste should be stopped up. The construction of wells for power should be prohibited. A flow of a limited number of gallons a minute, perhaps fifteen, should be allowed free to each quarter section, and all excess above that be discouraged by a tax. Careful records should be kept of all wells in the State. There should be a law making it a misdemeanor to allow water to be wasted through defective fixtures or otherwise, and in general a strict supervision of underground water supplies should be maintained by the State.

TENNESSEE, Chattanooga.—A committee appointed by the General Council to consider and report on the question of the erection of a suitable building for a **City Hall** has reported in favor of the Stone Fort as the proper site. As regards the building, after consulting with Architect R. H. Hunt, the committee recommends the construction of a City Hall and a city auditorium under separate roofs. For the City Hall proper, \$193,193 is recommended, and for auditorium \$111,696 is thought to be sufficient. The building of the auditorium should be deferred for the present.

Knoxville.—More fire stations, more equipment for the **Fire Department**, more men to man the present equipment, better construction of buildings, and better streets are the recommendations of Chief Filmore Tyson, of the Louisville Fire Department, following

his investigation of the Knoxville department. The condition of many of the streets was found to be so bad as to make good work on the part of the Fire Department impossible, while some streets were practically impassable. The general standard of building construction was pronounced as poor and not designed to retard fires. The importance of hook and ladder companies, Chief Tyson considers, is underestimated and their membership insufficient. Eight men, he considers, are few enough to man a hook and ladder truck. Their work is not all in raising the truck and mounting the ladders. They should set the pace, they should force openings, do the chopping, provide smoke holes and ventilation, and help the pipe men get the hose lines in the buildings.

TEXAS, Austin.—A special session of the City Council was held to discuss the proposition made by Thomas Moore, of Elizabethtown, N. J., for rebuilding the **Dam** across the Colorado River. Mr. Moore is promoting the building of an interurban electric railway between Austin and Lockhart, and it is intended that the dam shall furnish the initial power for operating the proposed line. Final action was deferred.

Dallas.—B. S. Wathen and associates have made application for a franchise to furnish **Natural Gas** in Dallas at a rate of \$1.10 per 1,000 cubic feet. W. H. McGoldrick agrees to furnish the same kind of gas for 50 cents per 1,000 cubic feet, or for less than one-half the cost promised by Major Wathen. Mr. McGoldrick is President of the Abilene Gas, Light, Fuel and Power Company and is connected with Eastern companies.

El Paso.—The Board of Health is of the opinion that much of the **Typhoid** fever prevailing is due to celery and other vegetables, and has recommended that the city enforce a rigid inspection of all vegetable wagons as well as milk and water. Much of the celery is said to be shipped into the city in cars which may be disease breeders.

VIRGINIA, Norfolk.—Mayor Reed is engaged in the preparation of his annual holiday proclamation, prohibiting the sale of **Toy Pistols**, which played such havoc with the juveniles several years ago. The sale of these pistols to minors is prohibited by law. It is the annual custom of the Mayor to issue a reminder to dealers in firearms, directing them to observe the law as it applies to the sale of these dangerous little toys.

WASHINGTON, Seattle.—A radical change in the policy of developing Seattle's **Park System** is recommended in a lengthy report of John C. Olmsted, landscape architect. Mr. Olmsted is opposed to the policy of spending all available park funds in small parks and playgrounds, leaving the general scheme of parkways and large landscape parks to be developed in the future. Such a policy is not wise in the long run from a financial point of view, and would result in a lack of parks embodying natural woods located within the borders of the city. Therefore he favors more purchases of land, notably in the Mount Baker subdivision. Land on Lake Washington or on the Sound should also be purchased together with rights to land under water.

WISCONSIN, Madison.—The fact that the Teamsters' Union of Madison is maintaining a monopoly on the **Municipal Stone Quarry** has stirred up a hornets' nest here. The union decided that none other than union wagons could take stone from the city quarry, or union men will tie up the city's work by striking. Alderman Doran went to get some stone at the quarry, but was turned away because he did not belong to the union. Now he is raising a storm in the City Council and an investigation will be made.

LEGAL NEWS

A Summary and Notes of Recent Decisions
—Rulings of Municipal Interest

Baltimore Water Bonds

Bond vs. Mayor and Council of Baltimore.—Judge Schmucker has delivered an opinion approving the decision of the circuit court which prevented the Mayor and City Council from submitting to the voters an ordinance authorizing the issuance of a loan of \$5,000,000 for the improvement of the municipal water supply. It was held that the ordinance authorizing the loan was void because no such loan could be issued without an enabling act of the Legislature.—Court of Appeals, Indianapolis, Md.

District Is Liable

Conroy et al. vs. Sanitary District of Chicago.—The court sustains the demurrers filed by the plaintiffs. Orders entered in the several causes are, in effect, that the district cannot flood and damage property adjoining the channel without making just compensation. It was the contention of the district that under the acts of 1822 and 1827, whereby the State of Illinois was empowered to dig the Illinois and Michigan canal, that it was made exempt from prosecution on the grounds that the United States, in granting it authority to form a drainage district, thereby vested in it certain reserves in the matter of overflows, when further improvements of the kind were being made. This, the court contends, is not so, ruling that the district is held, by the act by which it was created, to be responsible for all such damage.—Circuit Court of Will County, Joliet, Ill.

Diversion of Water

American Woolen Company vs. Kennebec Water District of Waterville.—The bill in equity was dismissed. Justice Emery's rescript is as follows: Lakes and ponds of more than ten acres in extent are known as "great ponds" and are under the ownership and control of the State for the benefit of the public. The State can at its discretion authorize the diversion of their waters for public purposes without providing compensation to riparian owners upon the ponds or their outlets. When the Legislature has directly granted authority to divert water from a great pond for public purposes without requiring as a prerequisite any proceedings for condemnation or for the ascertainment and payment of damages, the grantee can begin with diversion at once, and a bill in equity to restrain such diversion until such proceedings are had cannot be sustained.—District Court, Waterville, Me.

Election and General Statute

Swigart et al. vs. The City of Chicago et al.—Where the Legislature passes a law containing a referendum clause and providing a method of submitting the question of the adoption of the law to the voters, the method so provided must be followed, notwithstanding the general statute would control the question except for such special provision. The ballot used in the election of November 7, 1905, in the city of Chicago, upon the question of adopting

the amendment to the act relating to the incorporation of cities and villages, conforms to the provision of the amendment itself for submitting the question to the voters, and hence the election is valid notwithstanding the ballot does not comply with section 16 of the Australian Ballot Law, which controls, generally, the submission of such questions to the voters.—State Supreme Court, Chicago, Ill.

Period of Franchise

New York Electric Lines Company vs. City of New York.—The company applied for a mandamus against the city authorities requiring them to issue a permit to it to construct subways and establish a telephone system in the city of New York. The court holds that a right granted more than twenty years ago to construct subways in the public streets, where no attempt has been made to act under it, and where, in the meantime, the public authorities have provided ample means for the use of those desiring such a use as was authorized by this grant, may well be considered as having lapsed and cannot be revived, in violation of the rights acquired by others and to the public disadvantage.—Appellate Division, New York Supreme Court.

Effective When Passed

Byers vs. Leavenworth.—Judge Gillpatrick held that an ordinance passed by the city of Leavenworth becomes effective immediately upon its passage, that very night, and not when it is published in the official paper of the city. Therefore the suit of James Byers et al. against the city of Leavenworth enjoining it from collecting the special paving tax for the paving of South Fourth street from Cherokee south to Elm was ended.—District Court, Leavenworth, Kan.

NEWS OF THE SOCIETIES

American Public Health Association.—At the thirty-fourth annual convention in the City of Mexico, December 3-7, among the papers read were the following: "Notes on the Hygiene of Yellow Fever," by Dr. Alfred J. J. Austin; "Brief Notes on the Propagation of Yellow Fever," by Dr. Ernesto Duplan; "Considerations on the Way to Stamp Out Yellow Fever," by Dr. Eduardo Lamicq; "Sanitary Inspection of Dwelling Houses in the City of Mexico," by Dr. Domingo Orvananos; "Water Supply in Cities," by Dr. Enrique del Bosque. The last-named paper referred especially to the water supply of the City of Mexico. This supply at present amounts to 120 litres per day for a population of 400,000. At the present time the government is constructing an immense waterworks. A paper, read by Dr. J. Millan Ponce, dealt with observations on the census and mortality tables of the City of Mexico. The writer expresses the opinion that the city contains a population of 553,000, and that therefore the mortality rates have been much lower than reported.

The Engineering Association of the South.—About eighty members attended the eighteenth convention at the Kimball House, Atlanta Ga., December 14. President Julian Kendrick, City Engineer of Birmingham, Ala., presided. On the following day the members were escorted over the city by Capt. R. M. Clayton, City Engineer, to inspect the engineering work now in progress. In

the evening a banquet was tendered the visitors by the local members. The following were elected officers for the ensuing year: President, A. V. Gude, Atlanta; vice-presidents, Granberry Jackson and G. H. Harris, Birmingham, and R. M. Clayton, Atlanta; secretary and treasurer, H. M. Joens, Nashville; directors, Hunter McDonald, G. M. Ingland, and C. B. Wilson, all of Nashville.

Calendar of Meetings

December 26-28. **American Economic Association.**—Nineteenth annual meeting, Providence, R. I.—Winthrop M. Daniels, Secretary, Providence, R. I.

December 27-January 2. **American Association for the Advancement of Science.**—Annual meeting, New York City.—L. O. Howard, Secretary, Cosmos Club, Washington, D. C.

January. **American Institute of Social Service—Exposition.**—New York City.—Dr. William H. Tolman, Director, 287 Fourth avenue, New York.

January 3. **Engineers' Society of Western Pennsylvania.**—Annual meeting, Pittsburg, Pa.—F. V. McMullin, Secretary, 410 Pennsylvania avenue, Pittsburg, Pa.

January 7-9. **American Institute of Architects.**—Annual convention, Washington, D. C.—Glenn Brown, Secretary, Washington, D. C.

January 8. **Michigan Engineering Society.**—Annual Convention, Detroit, Mich.—F. Hodgman, Secretary, Climax, Mich.

January 8-11. **National Association of Cement Users.**—Annual meeting, Chicago, Ill.—W. W. Curtis, Secretary, 585 Caxton Building, Chicago, Ill.

January 9. **New England Water Works Association.**—Annual meeting, Boston, Mass.—Willard Kent, Secretary, Narragansett Pier, R. I.

January 9-11. **Iowa Engineering Society.**—Annual convention, Ottumwa, Ia.—A. W. Ford, Secretary, Iowa City, Ia.

January 15. **Wood Preservers' Association.**—Annual meeting, Memphis, Tenn.—C. W. Berry, Secretary, Laramie, Wyo.

January 16-17. **American Society of Civil Engineers.**—Fifty-fourth annual meeting, at the House of the Society, 220 West 57th street, New York City.—Charles Warren Hunt, Secretary.

January 16-18. **Northwestern Cement Products Association.**—Annual convention, St. Paul, Minn.—Martin T. Röche, Secretary, 410 Pioneer Press Building, St. Paul, Minn.

January 17-19. **Indiana Engineering Society.**—Annual meeting, Indianapolis.—C. C. Brown, Secretary, Commercial Club Building, Indianapolis.

January 19. **The Engineers' Club of Philadelphia.**—Annual meeting, Philadelphia, Pa.—W. L. Webb, Secretary, 1122 Girard street, Philadelphia, Pa.

January 22-24. **American Society of Heating and Ventilating Engineers.**—Annual meeting, New York City.—W. M. Mackay, Secretary, P. O. Box 1818, New York City.

January 23-25. **Illinois Society of Engineers and Surveyors.**—Annual meeting, Peoria, Ill.—E. E. R. Tratman, Secretary, 1636 Monadnock Block, Chicago, Ill.

January 24. **Ohio Local Health Authorities.**—First annual conference, Columbus, Ohio.

January 29. **Canadian Society of Civil Engineers.**—Annual meeting, Montreal.—Prof. C. H. McLeod, Secretary, 877 Dorchester street, Montreal, P. Q.

February 4-16. **National Brick Manufacturers' Association.**—National convention, St. Louis, Mo.—Theo. A. Randall, Secretary, Indianapolis, Ind.

February 15-16. **Wisconsin Gas Association.**—Annual meeting.—Henry H. Hyde, Secretary, Racine, Wis.

February 22. **New England Association of Gas Engineers.**—Annual meeting, Boston, Mass.—N. W. Gifford, Secretary, New Bedford, Mass.

February 26. **Association of Ontario Land Surveyors.**—Annual meeting, Toronto.—Killaly Gambie, Secretary, 405 Temple Building, Toronto, Ont.

THE WEEK'S CONTRACT NEWS

Relating to Municipal and Public Work—Street Improvements—Paving, Road Making, Cleaning and Sprinkling—Sewerage, Water Supply and Public Lighting—Fire Equipment and Supplies—Buildings, Bridges and Street Railways—Sanitation, Garbage and Waste Disposal—Police, Parks and Miscellaneous—Proposals and Awards

BIDS ASKED FOR

STATE	CITY	RECEIVED UNTIL	NATURE OF WORK	ADDRESS INQUIRIES TO
Street Improvements				
Ohio.....	Cincinnati.....	December 26, noon.....	Roadway Fifth Ave.; inc. 1,550 sq. yds. broken stone, 3,030 lin. ft. curb and gutter, 15,500 cu. yds. grading; estimate, \$12,642.	C. N. Dannenhower, Engineer.
Pennsylvania.....	Ridgway.....	December 26.....	Constructing 15,200 ft. of road.....	County Commissioners.
Indiana.....	Princeton.....	December 27, 2 P.M.....	Repairing gravel roads.....	Gibson County Commissioners.
Indiana.....	Petersburg.....	December 29.....	Gravel roads; 3 miles and 1,700 ft. Road No. 1, and 3 miles and 298 ft. Road No. 2.....	
Louisiana.....	New Orleans.....	December 31, 1 P.M.....	Asphalt paving, curb, gutter, etc., six sts. Paving street.....	T. W. Bassinger, County Auditor.
Iowa.....	Oskaloosa.....	January 1.....	Paving Lawrence alley with brick, Betts St. with asphalt; laying curb, drains, etc.....	Wm. J. Hardee City Engineer.
Ohio.....	Cincinnati.....	January 4.....	Paving Washington St. with Hillside block. Grade and gravel two roads, 2,500 and 10,400 ft. long in Pierson Township.....	C. E. Monroe, City Clerk.
Ohio.....	Steubenville.....	January 4.....	Paving Washington St. with Hillside block. Grade and gravel two roads, 2,500 and 10,400 ft. long in Pierson Township.....	M. J. Keefe, Clk. B. P. S.
Indiana.....	Terre Haute.....	January 5, 11 A.M.....	Grade and gravel two roads, 2,500 and 10,400 ft. long in Pierson Township.....	T. W. Vance, Clk. Bd. Pub. Serv.
New York.....	Newburgh.....	January 7, noon.....	Laying 18,700 sq. yds. vitrified or asphalt block or bitulithic on two streets.....	J. W. Denehie, County Auditor.
New York.....	Amityville.....	January 7.....	Macadamizing, etc., Broadway and Park Ave. Gravel road Railroad Twp.; cost, \$6,006.	Everett Garrison, City Engineer.
Indiana.....	Knox.....	January 7.....	Constructing gravel road, $\frac{1}{4}$ miles long.....	Chas. W. Darling, Village Engineer.
Indiana.....	Spencer.....	January 8, noon.....	Paving 35,400 sq. yds. at Public Square.....	L. M. Ransbottom, County Auditor.
Ohio.....	Troy.....	January 8, noon.....	Erecting municipal asphalt plant.....	Owen County Commissioners.
Ontario.....	Toronto.....	January 8, noon.....	Constructing gravel roads.....	L. A. Ziegfelder, Clk. B. P. S.
Indiana.....	Bedford.....	January 8, 1 P.M.....	Building roads in townships; 4,200 ft. Laundry, cost, \$18,085; 3,170 ft. Otter Creek, \$6,895; 4,040 ft. Brown, \$9,497; 2,527 ft. Washington, \$5,600.....	E. Coatsworth, Mayor.
Indiana.....	Versailles.....	January 8, 1 P.M.....	Gravel and macadam roads, Wright Twp. One mile gravel road, Hawcreek Township. Grade, drain, g'vel, etc., 2 roads, Penn. Twp. Gravel road, 8,275 ft. long, Van Buren Twp. Asphalt or bitulithic paving and granite curb, two streets; also macadam. Colby Ave.	Lawrence County Commissioners.
Indiana.....	Bloomfield.....	January 8, 1:30 P.M.....	Gravel and macadam roads, Wright Twp. One mile gravel road, Hawcreek Township. Grade, drain, g'vel, etc., 2 roads, Penn. Twp. Gravel road, 8,275 ft. long, Van Buren Twp. Asphalt or bitulithic paving and granite curb, two streets; also macadam. Colby Ave.	Nicholas Volz, Co. Auditor.
Indiana.....	Columbus.....	January 8.....	Grade, drain, g'vel, etc., 2 roads, Penn. Twp. Gravel road, 8,275 ft. long, Van Buren Twp. Asphalt or bitulithic paving and granite curb, two streets; also macadam. Colby Ave.	Wm. A. Deekard, County Auditor.
Indiana.....	Rockville.....	January 9, 1 P.M.....	Grade, drain, g'vel, etc., 2 roads, Penn. Twp. Gravel road, 8,275 ft. long, Van Buren Twp. Asphalt or bitulithic paving and granite curb, two streets; also macadam. Colby Ave.	Wm. A. Morris, County Auditor.
Indiana.....	Bloomington.....	January 9, 2 P.M.....	Grade, drain, g'vel, etc., 2 roads, Penn. Twp. Gravel road, 8,275 ft. long, Van Buren Twp. Asphalt or bitulithic paving and granite curb, two streets; also macadam. Colby Ave.	Henry Grubb, County Auditor.
Virginia.....	Norfolk.....	January 10, noon.....	Grade, lay macadam and sidewalks.....	S. M. Kerr, County Auditor.
Ohio.....	Cleveland Heights.....	January 15.....	Grade, lay macadam and sidewalks.....	W. T. Brooke, City Engineer.
Indiana.....	Princeton.....	February 1.....	Constructing 11 miles macadam gravel road. Paving streets; estimated cost, \$70,000.....	W. G. Phare, Fairmount, P. O.
Pennsylvania.....	Titusville.....	February 1.....	Constructing 11 miles macadam gravel road. Paving streets; estimated cost, \$70,000.....	Harry R. Embree, Co. Aud.
				H. A. Holstein, City Engineer.
Water Supply				
New York.....	New York.....	December 26, 2 P.M.....	Rubber valves, castings, bar iron, steel, brick, Portland cement, etc.....	John H. O'Brien, Water Com'r.
New York.....	Brooklyn.....	December 26, 2 P.M.....	Erecting eight water-tube boilers in remodeled Ridgewood Pumping Station.....	John H. O'Brien, Water Com'r.
Illinois.....	Chicago.....	December 27, 11 A.M.....	Constructing 8 ft. water tunnel, 28,350 ft. long.....	Wm. L. O'Connell, Com. Pub. Wks.
Oregon.....	Klamath Agency.....	December 28, 2 P.M.....	Constructing water system.....	Horace G. Wilson, Superintendent.
Indian Territory.....	Ada.....	December 28.....	Pumping engines, valves and sluice gates, Portland cement, and 16,000 ft. 8- and 10-inch pipe.....	
Washington.....	Tacoma.....	December 29.....	Furnishing air-lift pumping plant.....	A. P. Wood, Mayor.
Virginia.....	Fort Monroe.....	December 31, noon.....	Constructing 50,000-gal. steel water tank.....	Owen Woods, Com'r Pub. Works.
Ohio.....	Norwood.....	December 31.....	Extending mains in three streets.....	Capt. R. H. C. Kelton, Q. M.
Alberta.....	Calgary.....	December 31.....	Furnishing cement, lead pipe, corporation cocks, C-1 water pipe and sewer pipe.....	L. H. Gebhart, Village Clerk.
Saskatchewan.....	Arcola.....	January 2.....	Erecting steel water tank, 60,000 Imp. gal. cap; and 60,000 gal. wood water tank on steel superstructures, 40 ft. high.....	R. E. Speakman, City Engineer.
Louisiana.....	Jonesville.....	January 2.....	Sinking an artesian well.....	J. S. Bush, Secretary.
Pennsylvania.....	Philadelphia.....	January 4, noon.....	Pumping engine for Lardner's Point Station. Coal handling machinery and pockets, Torrington pumping station.....	T. M. Mathews, Mayor.
Pennsylvania.....	Philadelphia.....	January 4, noon.....	Furnishing 2,800 tons 4 to 16-inch C-1 water pipe, and 130 tons special castings, also for valves and water mains.....	John R. Hathaway, Dir. D. P. W.
Illinois.....	Chicago.....	January 5, 11 A.M.....	1,000 $\frac{1}{2}$ -in. water meters and connections.....	John R. Hathaway, Dir. D. P. W.
Ohio.....	Norwood.....	January 7, noon.....	Constructing waterworks system.....	Wm. L. O'Connell, Com. Pub. Wks.
Missouri.....	Rolla.....	January 7, noon.....	Constructing system of waterworks.....	L. H. Gebhart, Clk. Bd. Pub. Servic
Indiana.....	Elkhart.....	January 10.....	Triple expansion steam pumps of 2,500,000 gals., and 3,000,000 gals. cap. at pump. s'n. Constructing water system.....	McRae & Harris, Engineers.
Louisiana.....	Pineville.....	January 15, noon.....	Laying 754 ft. 6-in. cast-iron water pipe.....	E. L. Arnold, Pres. Bd. Pub. Wks.
Pennsylvania.....	Meadville.....	January 15, noon.....	1,840 ft. 4-in. pipe, 1,784 ft. 2-in. pipe connections, valves, hydrants, etc.	D. F. Huddle, Mayor.
Arizona.....	Bisbee.....	January 15, 2 P.M.....	1,800 tons, 4 to 42-in. cast-iron pipe and 1,100 tons of specials; also for hauling and laying same.....	Harry Ellsworth, Superintendent.
Ohio.....	Cleveland Heights.....	January 15.....	125,000 lbs. steel bars for reinforcement of concrete, U. S. Reclamation Service.....	Cleve W. Van Dyke, Manager.
Illinois.....	Kangley.....	January 22, 4 P.M.....	6,000,000 gal. and 10,000,000 gal. cap. pumping engine, steam or electric power.....	W. G. Phare, Fairmount P. O. Clerk.
Louisiana.....	New Orleans.....	January 23, 3 P.M.....	Water pipes, specials, manholes, valves, etc.	Geo. Clay, Village Clerk.
Nebraska.....	Mitchell.....	January 24, 2 P.M.....	Water pipes, specials, manholes, valves, etc.	Geo. G. Earl, Gen. Supt. Water Bd.
Michigan.....	Muskegon.....	January 28, noon.....	Water pipes, specials, manholes, valves, etc.	E. A. Hitchcock, Washington, D. C.
Manitoba.....	Winnipeg.....	March 1, 2:30 P.M.....	Water pipes, specials, manholes, valves, etc.	William Dixon, Supt. Water Works.
				H. N. Ruttan, City Engineer.
Sewerage				
New York.....	New York.....	December 27, noon.....	System of sewers and appurtenances, Fourth Ward, Borough of Richmond.....	George Cromwell, President.
Oregon.....	Klamath Agency.....	December 28, 2 P.M.....	Constructing sewer system.....	Horace G. Wilson, Superintendent.
New York.....	Syracuse.....	January 2.....	Constructing sewer system Elmwood Dist. H. H. Brewster, Engineer.	

Sewerage—Continued

Illinois.....	Rosemond.....	January 2.....	Three-mile 8- to 16-in. tile drainage ditch.....	J. W. Dappert, Taylorville, Eng'r.
Ohio.....	Steubenville.....	January 4.....	Building sewer in Washington Street.....	R. L. Brownlee, Pres. B. P. S.
Manitoba.....	Winnipeg.....	January 4.....	Constructing \$72,000 concrete trunk sewer.....	H. N. Ruttan, City Engineer.
Missouri.....	Rolla.....	January 7.....	Constructing sewers; cost, \$10,000.....	McRae & Harris, Engineers.
California.....	Oakland.....	January 7, 11 A.M.....	Building two brick sewers; cost, \$97,000; three concrete, \$165,000, and iron-stone pipe sewer, \$11,500; six bids.....	W. B. Fawcett, Sec'y B. P. W.
New Jersey.....	Merchantville.....	January 12, 3 P.M.....	Constructing system of sanitary sewers.....	A. W. MacCallum, Chm. Com.
Arizona.....	Bisbee.....	January 15, 2 P.M.....	Sewerage system and disposal plant.....	Cleve W. Van Dyke, Manager.
Iowa.....	Webster City.....	January 16.....	Drainage ditch, Dists. Nos. 23, 30, 24 and 17.	O. A. Craigwick, County Auditor.
Kansas.....	Wichita.....	January 21, 5 P.M.....	Bldg's storm water sewer No 5; cost \$310,609	R. N. Dorr, City Clerk
Iowa.....	Cedar Falls.....	January 22, 7:30 P.M.....	Building 3,768 ft. 60-, 48- and 42-in. brick, and 36- and 30-in. vitrified pipe sewer.....	F. X. Miller, Chm. Sewer Com.
Ohio.....	St. Mary's.....	January 30.....	Complete sanitary sewer system, 14 miles.....	riggs & shermann, Toledo, Eng'r.
Missouri.....	Cape Girardeau.....	February 4, 8 P.M.....	Complete sewer system, Dist. No. 1: 12 miles ppe 8- to 21-in. drain and appurtenances.....	Granbery Jackson, Nashville, Tenn.
Iowa.....	Burlington.....	March 18.....	Constructing sewers in certain streets.....	John F. Winters, City Engineer.

Public Buildings

Illinois.....	Princeville.....	December 26.....	Erecting 8-room brick school building.....	Parr & Hulsebus, Peoria, Archs.
Wisconsin.....	Gillett.....	December 27, 2 P.M.....	Erecting high school building.....	L. J. Newald, Clk. Bd. Ed.
New Jersey.....	Montclair Heights.....	December 27, noon.....	Erecting normal school.....	Edward Russ, Chm. Bldg. Com., State House, Trenton.
New York.....	Brooklyn.....	December 28, 10 A.M.....	Building station-house, prison and stable.....	Theo. A. Bingham, Police Com.
Minnesota.....	St. Paul.....	December 28, 11 A.M.....	Erecting 8-room addition Ericsson School.....	Robert A. Smith, Mayor.
Louisiana.....	Covington.....	December 29, noon.....	Erecting school building.....	Dr. C. Z. Williams, Mayor.
Georgia.....	Savannah.....	December 31.....	Erecting three-story high school.....	Owens & Cisco, Baltimore, Md., Arch.
Georgia.....	Cordele.....	December 31.....	Two-story Court House and jail; cost, \$80,000	Lockwood Bros., Columbus, Archs.
Wisconsin.....	Brodhead.....	December 31.....	Erecting \$30,000 High School.....	F. H. Kemp, Beloit, Architect.
Iowa.....	Council Bluffs.....	December 31.....	Erecting school house in Lewis township.....	H. A. Ellerbeck, Chm. Committee.
Ohio.....	Toledo.....	December 31.....	Building addition to fire station.....	Brand Whitlock, Mayor.
Virginia.....	Fort Monroe.....	December 31.....	Repairs to barracks buildings Nos. 5 and 10.....	Capt. R. H. C. Kelton, Q. M.
California.....	Oakland.....	January 2, 11 A.M.....	Two-story fire engine house; cost, \$15,000.....	W. B. Fawcett, Sec'y B. P. W.
New York.....	Syracuse.....	January 3, 6 P.M.....	Erecting high school building.....	Archimedes Russell, Architect.
Rhode Island.....	Newport.....	January 7, 3 P.M.....	Building extension to U. S. Post Office.....	J. K. Taylor, Washington, D. C.
New Jersey.....	Union.....	January 7, 8 P.M.....	Erecting two-story brick fire house.....	Emil Bautz, Jr., Town Clerk.
Georgia.....	Atlanta.....	January 10, 3 P.M.....	Foundations for Post Office and Court House.....	J. K. Taylor, Washington, D. C.
Wyoming.....	Cheyenne.....	January 14, 11:30 A.M.....	Constructing buildings, etc. Ft. D. A. Russell.	Capt. V. K. Hart, Q. M.
Texas.....	Dallas.....	January 15, 3 P.M.....	Extension to Post Office and Court House.....	J. K. Taylor, Washington, D. C.
Arizona.....	Talklai.....	January 16, 2 P.M.....	Building stone mess hall, Rice Station School.	J. S. Perkins, Superintendent.
Iowa.....	Leon.....	February 1.....	Erecting \$75,000 Court House.....	A. S. Thorp, Clk. Dist. Court.
Virginia.....	Richmond.....	February 1.....	Fire-proof high school building, 180 x 220 ft.; estimated cost, \$500,000.....	Charles W. Bryant, Architect.
Louisiana.....	New Orleans.....	February 4, 2 P.M.....	Erecting court house 250x290 ft. 4 stories, pile foundations, stone and terra cotta exterior, electric elevator, wiring, heating, etc., steel or reinforced concrete frame.....	Bernard McCloskey, Pres. Com.
North Dakota.....	University.....	February 5.....	Library building State Univer'y, cost, \$60,000	J. W. Wilkerson, Sec'y Bd. Trustees.
Ohio.....	Marion.....	April 1.....	Four-story addition to school; cost, \$10,000.	Geo. B. Christian, Jr. Clerk, Bd. Ed.

Bridges

Kansas.....	La Crosse.....	December 27, noon.....	Iron bridge 50 ft. long, 16 ft. roadway.....	B. F. Krause, County Clerk.
West Virginia.....	Charleston.....	December 27, 8 P.M.....	Constructing highway bridge.....	J. F. Hudson, Chm. Bridge Com.
Ohio.....	Toledo.....	December 27.....	Erecting two bridges.....	Lucas County Commissioners.
Indiana.....	Princeton.....	December 27.....	Erecting new iron bridge and repairing old one.....	J. W. Phillips, Co. Com'r.
Missouri.....	Kansas City.....	December 28, 11 A.M.....	Building 30-ft. I-beam steel bridge; two stone arch culverts and new abutments.....	Clerk, Jackson County.
Arizona.....	Tombstone.....	December 28.....	Building steel bridge with concrete piers.....	J. J. Bowen, Chm. Bd. Super visors.
Indiana.....	Greenfield.....	December 29, 10 A.M.....	Building 112-ft. span bridge; also 30-ft. steel and concrete bridge.....	W. J. Garriott, County Auditor.
Indiana.....	Indianapolis.....	December 29, 10 A.M.....	Erecting bridge over White River.....	C. J. Clark, County Auditor.
Indiana.....	Rockville.....	December 29, 1 P.M.....	Building approach to bridge across Wabash.....	Parke County Commissioners.
Massachusetts.....	Cambridge.....	January 2, noon.....	Steel highway draw-bridge across canal.....	L. M. Hastings, City Eng'r.
Louisiana.....	La Fayette.....	January 3.....	Iron draw-bridge, with 16-ft. roadway.....	Felix H. Morton.
Ohio.....	Cincinnati.....	January 4, noon.....	Erecting new bridge, Green Township.....	W. H. Blair, Pres. Co. Com'r's.
Michigan.....	Manistee.....	January 4, 2 P.M.....	Repairing 100-ft. span bridge and building 50-ft. span bridge of reinforced concrete.....	County Surveyor.
Nebraska.....	York.....	January 7.....	Building wooden or steel bridges in county.....	County Clerk.
Mississippi.....	Hattiesburg.....	January 8.....	Steel bridge over Big Black Creek.....	T. E. Batson, Clk. Bd. Sup.
Missouri.....	Albany.....	January 8.....	Building on tube foundation: 160-ft. span, 48-ft. approach; 90-ft. span, 64-ft. approach; 70 ft. span, 36-ft. approach; on 1-beam leg foundation: three 40-ft. spans, 64-ft. approach; six 30 I-beams, 64-ft. approach; five 24-ft. I-beams, twelve 20-ft. I-beams, and repair 300-ft. span.....	W. A. Henton, County Surveyor.
Washington.....	Walla Walla.....	January 9, 1 P.M.....	Steel and wooden bridge over Touchet River.....	County Commissioners.
Kansas.....	Wichita.....	January 12.....	Pile bridges: 150x230 and 60 ft. long; also 60-ft. steel bridge, all 16 ft. wide.....	Sedgwick County Commissioners.
Washington.....	Colfax.....	January 15.....	Build bridges at Rosalia, Colton and Sutton.....	Whitman County Commissioners.
Tennessee.....	Memphis.....	January 16, noon.....	Erecting steel girder bridge at Madison Ave.	James H. Malone, Mayor.

Miscellaneous

New York.....	New York.....	December 26, 10 A.M.....	Furnishing and placing electrical conductors under ground.....	T. A. Bingham, Police Com'r.
District of Columbia.....	Washington.....	December 26.....	Electric plant for equipping Capitol and other buildings.....	Elliott Woods, Superintendent.
New York.....	New York.....	December 27, 10 A.M.....	Letter files and cabinets.....	T. A. Bingham, Police Com'r.
New York.....	New York.....	December 27, 10:30 A.M.....	Furnishing 3,000 ft. 3-in. rubber fire hose.....	F. J. Lantry, Fire Commissioner.
New York.....	New York.....	December 27, noon.....	Building crematory or refuse destructor.....	George Cromwell, Borough Pres
Ohio.....	Columbus.....	December 28.....	Furnishing 1,300 450-watt electric light arc lamps for one year.....	A. R. Callow, Sec'y Bd. Pub. Ser.
California.....	San Francisco.....	December 29.....	Sale of franchise for street car line.....	Board of Supervisors.
New York.....	New York.....	December 31, 2 P.M.....	Lighting streets, parks, etc., with gas and electricity, new lamps, etc., for one year.....	John H. O'Brien, Commissioner.
Mississippi.....	Greenville.....	December 31.....	Building 61-mile line for Greenville, Leland and Rolling Forks. Co. Railway.....	W. R. Barkesdale, Memphis, Tenn., President.
Kentucky.....	Carrollton.....	January 2.....	Dynamo, engine and new boilers for electric light plant; estimate, \$25,000.....	R. L. Bartlett, City Engineer.
Ohio.....	Cleveland.....	January 3.....	Building and operating street railways.....	Peter Witt, City Clerk.
Kansas.....	Clay Center.....	January 4.....	Boilers, engines and electrical machinery.....	Geo. W. Hanna, Mayor.
Ohio.....	Lakewood.....	January 4.....	Collecting garbage and dead animals.....	B. M. Cook, Clk. Bd. Health.
New York.....	West Point.....	January 5, noon.....	Constructing electrical subway system.....	Quartermaster U. S. M. A.
Indiana.....	Mt. Vernon.....	January 9, 3 P.M.....	Erecting Soldiers' and Sailors' monument.....	S. G. Howard, County Auditor.
Tennessee.....	Memphis.....	January 10, noon.....	Furnishing 3,000 metal street signs.....	James H. Malone, Mayor.
Virginia.....	Salem.....	January 10, 7:30 P.M.....	Sale of street railway franchise.....	Thomas I. Preston, Mayor.
California.....	Pasadena.....	January 10.....	Equipment for municipal electric-light plant.....	Herman Dyer, City Clerk.
Pennsylvania.....	Nanticoke.....	January 15.....	Building power house, head and tailrace, etc.	Am. Pipe Mfg. Co., 112 N. Broad Street, Philadelphia.
Virginia.....	Richmond.....	February 1, 5 P.M.....	Erecting bldgs., machinery, apparatus, pipes, etc., to rehabilitate and enlarge gas works; cost, \$325,000 to \$350,000.....	W. P. Knowles, Superintendent.
Mississippi.....	Natchez.....	March 7, 4 P.M.....	Lighting for 10 years, from March 7 1908.	S. B. Stewart Chm. Light Com.

STREET IMPROVEMENTS

Gadsden, Ala.—Bonds, \$20,000, for street improvements, have been sold through Stein-
er Brothers of Birmingham; Broad street may be paved.—Charles P. Smith, Mayor.

Little Rock, Ark.—Arrangements are being made to pave certain portions of Izard street.

Augusta, Ga.—Council favors the constructing of cement pavement in certain streets.

Macon, Ga.—The question of issuing bonds for improvements of streets is under considera-
tion.

Champaign, Ill.—Estimates are being pre-
pared for paving to the amount of \$200,000.—
G. C. Fando, City Engineer.

Fort Wayne, Ind.—Plans and specifications are being prepared for paving certain portions of Washington street and other streets and avenues.—Frank D. Randall, City Engi-
neer.

Frankfort, Ind.—The property owners have petitioned Council for the construction and paving of several streets, including South Temple and Second South streets.

Hammond, Ind.—Council is preparing to lay cement walks in many streets.—John L. Rohde, President, Board of Public Works.

Indianapolis, Ind.—Resolutions have passed Council for brick roadways and curbing for about ten streets and alleys.

Valparaiso, Ind.—Estimates are being pre-
pared for improving certain streets by con-
structing cement curbing and gutter.—Robert Ewing, City Clerk.

Centerville, Ia.—Council has decided to improve certain streets by paving; estimated cost, \$7,000.

Des Moines, Ia.—Plans are being prepared for improving down town streets.—George Dobson, City Engineer.

Wichita, Kan.—Council is considering paving of Lawrence avenue with brick.

Wichita, Kan.—The Atchison, Topeka and Santa Fe Railway is preparing to pave the ground surrounding the freight house.

Louisville, Ky.—The Barber Asphalt Company has been awarded the contract for the improvement of Culbertson avenue, in New Albany, at \$4.29 per lineal foot.—Samuel T. Mann, Engineer.

New Orleans, La.—The Street and Land-
ings Committee is considering paving Prytania street with bitulithic and laying sub-
surface drains; and Joseph street with small granite block and subsurface drains.

Rayne, La.—The J. N. Bigler Construction Company, Bessemer, Ala., has been awarded contract for 40,000 square feet of sidewalks, surface material $\frac{3}{4}$ -inch mortar coat, $\frac{3}{4}$ inches concrete, 2-inch sand foundation, at 19 $\frac{1}{2}$ cents per square foot; wearing coat 5 parts screened sand to 3 parts cement; concrete 1:3:5 parts clam shell; filling and removing trees included in contract; the company also has contract for setting 7,000 lineal feet of brick curbing at 50 cents per lineal foot; curb 8 inches thick and averaging 24 inches in height; outside and top faced with $\frac{1}{2}$ -inch cement mortar.—R. B. Boettcher, Engineer.

Flint, Mich.—The city will issue \$6,100 5 per cent. paving bonds.

Hastings, Mich.—The election resulted in favor of \$35,000 4 per cent. paving bonds.

Manistee, Mich.—An issue of \$16,000 paving bonds has been authorized.

Detroit, Mich.—The estimated cost of widening Washington boulevard and opening Howard street will be \$250,000; estimates have been prepared for repairing 11 streets and parks and resurfacing 21 thoroughfares on the west side; various materials are to be used.—J. J. Haarer, Commissioner of Public Works.

Crookston, Minn.—Estimates are being prepared for improving Houston street by paving with asphalt; estimated cost, \$20,000.—A. N. Child, City Clerk.

St. Paul, Minn.—The Committee on Streets has decided to pave certain streets in the Crocus Hill district.

Natchez, Miss.—The City Engineer has been directed to prepare plans for paving and improving several streets.

Pascagoula, Miss.—The city is preparing to improve streets at a cost of \$35,000.

St. Louis, Mo.—The Board of Public Works proposes to improve the King's Highway by grading, paving, etc.

St. Joseph, Mo.—The Board of Public Works has ordered plans and specifications prepared for artificial stone sidewalks, to be constructed in several streets.

Hastings, Neb.—Council has under considera-
tion the issue of \$35,000 bonds for paving purposes.

Santa Fe, N. M.—Council has directed the City Engineer to advertise for bids for im-
proving certain streets with cement walks.—
A. P. Hill, City Clerk.

Binghamton, N. Y.—The Board of Supervisors have recommended a large number of highway improvements in Windsor and Main townships; it is proposed to construct a macadam road about a mile and a half long.—Address Geo. W. Edwards, of Lisle.

Ashtabula, O.—Council has decided to pave the Spring street viaduct with creosote block; the pavement is to be laid on a foundation of three-inch creosoted Georgia pine and the paving on top is to be with block.

Bellefontaine, O.—Resolutions to pave North Detroit street have passed Council; the specifications include stone and cement curbing; bids will be opened about the first of March.—J. D. McLaughlin, Chairman, Paving Committee.

Bellvue, O.—The improvement of Castalia street by paving is to be undertaken early in the spring.

Bucyrus, O.—The improvement of Galion street by paving with brick or asphalt will be one of the first improvements for the early spring.

Cincinnati, O.—August J. Henkel has received a contract for paving Donnersberger street with brick, covering 1,100 square yards, at his bid of \$2,600.

Cleveland, O.—Resolutions to pave Murray Hill avenue, East 19th place, Stern's road, Lexington avenue, Osage avenue, Anderson avenue and Deacon avenue have passed Council.—Peter Witt, City Clerk.

Conneaut, O.—Resolutions to pave, drain and curb Broad and 15th streets have passed Council; brick blocks will be used.—H. T. Culp, City Clerk.

Dayton, O.—Ordinances and resolutions for paving some 20 or 40 streets and alleys have passed Council.—C. P. Floyd, City Clerk.

East Liverpool, O.—Ordinances for paving Ida and Monroe streets have passed, and it is proposed also to sewer Ida street from Enoch to Vine street; Monroe street is to be paved from 4th to 5th.—Willis Davidson, City Auditor.

Lancaster, O.—Preliminary legislation for paving Chestnut street, the estimated cost of which is \$15,000, has passed Council.—B. E. Shell, City Clerk.

Mt. Vernon, O.—The resolution to pave Spice alley has passed its third reading; the estimate on the cost of paving Gambier street is \$35,500, and of paving E. Burgess street, \$13,426.

Newark, O.—The Board of Public Service has awarded to Bremen and Nutter the contract for paving West Main street, at \$22,090; this does not include curbing or concrete foundations; it does, however, include cement work and the construction of sewer drops and manholes; Cramer and Richardson have the contract for curbing, at \$4,800, and S. J. White for concrete foundations, at \$2,400; Bolen brick will be used in paving, and will require 250 carloads.

Painesville, O.—Plans are ready for paving Elm street, to cost \$1,800; bids will be opened in the spring.

Delaware, O.—The contract for paving Mabel street has been awarded to J. P. Hutchinson, at \$1,340; Clarence Hazelton will pave Noble street for \$946.

Youngstown, O.—An ordinance has been passed authorizing an issue of \$508,000 South Watt street improvement bonds.—Pyatt W. Hubles, City Clerk.

Steubenville, O.—Council has passed a pre-
liminary legislation for paving Washington street with Hillside block.—W. M. Trainer, Clerk of Council.

Toledo, O.—One of the important paving jobs to be undertaken in the spring is the paving of the cemetery route, including Sherman street, from LaGrange to Stickney street; the paving of Summit avenue from Ohio to Michigan avenue is also to be undertaken in the spring.

El Reno, Okla.—Council has decided to ad-
vertise for bids for paving certain streets with brick or asphalt.

Franklin, Pa.—The immediate paving of Elk and West Park streets has been requested by W. Rowland and a large number of other petitioners; asphalt block will probably be used, although the material is still a matter undecided.

Deadwood, S. D.—Council has under considera-
tion paving certain streets with creosoted blocks.

Dallas, Tex.—Mayor Smith has signed a contract with Carleton H. Wells, representing the Texas Bitulithic Paving Company, for repaving Akard street, between Commerce and Pacific avenues; the Municipal Commission has approved contract with the company for laying 19,615 square yards of paving on Forest avenue, for \$50,220.25, or \$2.35 per square yard.

Wallsburg, Tex.—Chambers county will hold an election to vote on \$50,000 road and bridge bonds.

Beaumont, Tex.—The Attorney General has approved issue of \$130,000 5 per cent. bonds for street and school purposes.

Tacoma, Wash.—B. N. Kibler was awarded contract for grading and laying sidewalks on Puget Sound avenue, for \$9,730; other bidders were F. A. Keasal and P. E. McHugh; no bids were received for grading and laying sidewalks on North Pine, Alder and other streets in Districts No. 315 and No. 236.—Owen Woods, Commissioner of Public Works.

SEWERAGE

Eatonont, Ga.—The Bank of Eatonton has purchased \$15,000 bonds issued for constructing sewerage system; Engineer E. C. Davis, of Griffin, has the contract.

Cairo, Ill.—Council has passed ordinances for building sewers and filling in Douglas, Fourteenth, Fifteenth, Cedar, Locust and Pine streets, and Jefferson avenue; estimate, \$32,109.06; also Sixteenth street from Washington avenue to Pine street, and Seventeenth street from Walnut to Pine street, estimate \$19,794.88; sewers, manholes, inlets, etc., estimate \$5,455.71; filling in Eighteenth, Nineteenth, Twentieth, Cross and Cedar streets, estimated \$19,794.88.—Address Mayor Parsons.

Dundee, Ill.—The Trustees of West Dundee have accepted plans for complete sewer system, prepared by Anderson and Scheffow, of Elgin.

Rockford, Ill.—Petition is being made for sewer system on East State street.

Rock Island, Ill.—The People's Construction Company, Davenport, Iowa, has been awarded contract for laying 3,650 feet of 36-inch tile sewer in 14-foot trench, excavating 8 feet of gravel and 6 feet of rock, and handling ground water, at \$5.75 per lineal foot; 1,400 feet 42x42-inch reinforced concrete, 1-inch, 2-inch, 5-inch, thickness of shell 1 foot in 9-foot trench, including 3 feet of rock excavation, at \$5.40 per foot; 465 feet 30-inch tile sewer, 6-foot trench, at \$3.50 per foot; 1,000 feet 24-inch tile sewer, 8-foot trench, \$2.05 per foot; 2,005 feet 18-inch tile sewer, 8-foot trench, \$1.70 per foot; 1,275 feet 15-inch tile sewer, 8-foot trench, \$1.05 per foot; 2,260 feet 12-inch tile sewer, 8-foot trench, 95 cents; 3,195 feet 10-inch tile sewer, 8-foot trench, 75 cents; 3,225 feet 8-inch tile sewer, 8-foot trench, 60 cents; manholes, 10-foot depth, \$50 each; rock excavation, \$2.90 per cubic yard; surface water inlet, \$4,500; wages of common labor, \$2 per day, 9 hours; total amount of contract, \$47,232.50; King-Lambert Co., Des Moines, Ia., bid \$48,100.—Wallace Treichler, City Engineer.

Evansville, Ind.—Engineer Temme has completed plans for the construction of a \$300,000 sewer.

Winchester, Ky.—Council is preparing to build a sanitary sewer system for the construction of which bonds amounting to \$40,000 will be issued.

Boston, Mass.—T. H. Gill Company was low bidder for constructing part of Sec. 85, extension of High Level Sewer, South Metropolitan System, at Brighton, at \$49,280, as follows: 1,200 lineal feet earth or rock excavation, in tunnel 5-foot, 9-inch by 6-foot sewers, at \$28.70 per foot; 60 cubic yards brick masonry, Portland in shafts, at \$14; 1,400 cubic yards concrete masonry, Portland in tunnel, at \$10; other bidders were Coleman Bros., \$52,600; George M. Byrne Co., \$54,760; Falvey & Kelly, \$55,540; Metropolitan Contracting Co., \$56,200; Rowe & Perini, South Framingham, \$57,080.

Detroit, Mich.—Bids will be readvertised for the sewer and dock at the foot of Joseph avenue; the lowest bidder was John Genzil and Company, at \$4,600.—Secretary McGee, Department of Public Works.

St. Louis, Mo.—Council has appropriated \$1,500,000 for the construction of public sewers.

Minden, Neb.—Burns and McDonnell, Kansas City, Mo., have been engaged to make plans and specifications for a complete sewerage system.

Albany, N. Y.—Council has under considera-
tion the establishing of a sewage disposal plant in connection with the intersecting sewer.

Grand Forks, N. D.—Council has granted permission for the construction of a trunk sewer for the State University and Wesley College, to connect with the city's trunk sewer; the City Engineer is preparing plans and estimates.—Address Wm. Budge, Board of Trustees, State University, or Dr. Robertson, Board of Trustees, Wesley College.

Akron, O.—Council is considering plans for extending the city sewage outlet to a point 1,000 feet further down the Little Cuyahoga, and the connection of the Howard street sanitary sewer, which now empties into the Little Cuyahoga, under the North Howard street bridge, with the main outlet; the changes will cost several thousand dollars.—City Engineer Payne.

Carthage, O.—Estimates are being prepared for construction of 8 and 10-inch sewers in several streets.—R. K. Shannon, City Clerk.

East Liverpool, O.—C. B. Ogden, City Health Officer, has urged Council to authorize the construction of sewers throughout the entire Second District of this town; City Solicitor Geo. E. Davidson has submitted resolution declaring it necessary to sewer Pine and Greasley streets; it is likely that District No. 2 will be sewered.

Niles, O.—The Sewer Commission has made its report to the Council on the cost of the Vienna avenue district sewer, estimating

a rate of \$1.36 per foot frontage; the property will be inspected, and the improvement probably authorized.

Youngstown, O.—Council has authorized the drawing of plans for a sewage disposal plant at once; resolutions and ordinances to sewer Seneca street have passed.—John Mulholland, City Engineer.

Jenkintown, Pa.—The Council is considering the question of issuing \$60,000 sewer bonds.

Sharon, Pa.—Wm. McIntyre Sons have the contract for the large sewer for the South Dock Company, at \$2,000.

Knoxville, Tenn.—An ordinance has been passed for the construction of sewers in several streets, according to plans and specifications.

Virginia Beach, Va.—The proposition to issue \$50,000 water and sewerage bonds carried.

Charleston, W. Va.—The proposition to issue \$120,000 in bonds for sewers has been carried; \$100,000 funding bonds and \$25,000 bridge bonds also carried.

WATER SUPPLY

Vallejo, Cal.—Council has appropriated \$10,000 for the construction of water main.

Florence, Col.—The Colorado Iron Company will construct three reservoirs of large capacity.

Wrightsville, Ga.—Bids will be received January 2, for the purchase of \$25,000 5 per cent. waterworks bonds.—Mayor W. J. Brinson, Jr.

Cottonwood, Ida.—A private company has petitioned Council for franchise to operate water plant.

Mattoon, Ill.—The Chamber of Commerce started subscription to organize a company with a capital of \$100,000 to furnish adequate water supply for the city.

Peoria Heights, Ill.—The village offers \$15,000 worth of water main to any firm which will promise to erect water plant within the village limits.

Springfield, Ill.—Council is considering the matter of establishing a filtration plant.

Huntington, Ind.—Bids will be received January 1 for the purchase of \$25,000 4 per cent., 15-year waterworks bonds.

Hubbard, Ia.—The question of issuing \$300,000 bonds for the improving of the water plant is under consideration.

Ottumwa, Ia.—Council is again considering matter of purchasing water plant, and establishing municipal water system.

Frontenac, Kan.—The citizens have voted \$18,000 bonds for the construction of water plant.

Elm Creek, Neb.—Bids will be received, February 1, for \$10,000 5 per cent., 5 to 20-year waterworks bonds.—J. S. Fields, Village Clerk.

Bryan, O.—There will be a special election December 27, to vote on \$40,000 bond issue, proceeds to be applied to the improvement of the municipal water and light plant; new mains to the extent of \$10,000 will also be laid.

Cincinnati, O.—The Board of Waterworks Commissioners have authorized the Mayor to employ a competent engineer to make surveys for an emergency reservoir to cross the Licking river.

Delaware, O.—This town is considering the project of building a municipal waterworks plant.

Massillon, O.—The citizens have voted issue of bonds for improving waterworks.

Springfield, O.—Preparations are being made for a bond issue for waterworks extension.—W. H. Steverling, City Engineer.

Steubenville, O.—A water and light company has been organized at Follansbee, and the company will at once take up the question of building a modern waterworks plant; the company will be capitalized at \$75,000.

Warren, O.—The Board of Public Service will employ an engineer to appraise the cost of the Warren Water and Light Company, which the city contemplates purchasing.

Worcester, O.—The question of issuing bonds for improving the water system is to be submitted to a vote of the people.

Zanesville, O.—The Waterworks Department is in need of a new engine and new pumps, and the matter is to be brought to the attention of Council at once.

Sayre, Okla.—Burns and McDonnell, Kansas City, Mo., are preparing plans and specifications for a complete waterworks plant.

Bristol, Tenn.—The city authorities will petition Legislature for authority to issue \$35,000 bonds for water system.

Watertown, Wis.—Bids will be received December 31 for the purchase of \$10,000 4½ per cent. waterworks bonds.—Frank S. Webster, City Clerk.

Shoshone, Wyo.—Franchise has been granted to the Shoshone Water Company to maintain a water system; water will be brought from the Big Horn river.

Hull, Que.—Council has decided to issue \$18,000 bonds for extending water system; a new inlet pipe will be constructed.

LIGHTING AND ELECTRICITY

Bisbee, Ariz.—The International Gas Pipe Company has received franchise to construct an electric-light and power system.

Tucson, Ariz.—The citizens have voted for municipal ownership of the lighting plant.—L. H. Manning, Mayor.

Groveville, Cal.—The Great Western Power Company proposes to issue \$25,000 in bonds for furnishing lighting and heating to all the towns in Superior and Central California.

Pasadena, Cal.—Council has passed ordinance to sell the municipal light bonds.

Wilmington, Del.—The Southern Electric Company has been awarded contract for wiring the second and third floors of the City Hall, for electric lights, for \$215.75.—H. C. McQueen, Chairman, Board of Audit and Finance.

Americus, Ga.—Council is considering proposition of Joseph Roman, of Atlanta, to light the city and pump water, and ultimately for a street railroad and day electric current for commercial purposes.

Crawfordsville, Ga.—The citizens will vote on the question of issuing bonds for building an acetylene gas plant.

Sandersville, Ga.—The city has voted \$30,000 bonds for establishing an electric-light system.

Bluffton, Ind.—Council has purchased three new 150-h.p. boilers for the electric-light and waterworks plant for \$4,350.

Lafayette, Ind.—The Ft. Wayne & Wabash Valley Traction Company will expend \$50,000 in the enlargement of its power plant.

Marion, Ind.—The Marion electric-light plant, owned by the American Electric Company, with offices at Philadelphia, proposes to extend its plant.

Plymouth, Ind.—Council has granted a gas franchise for 25 years to Clarence Geist, of Philadelphia, plant costing \$30,000, to be completed in a year, and the price of gas to be \$1.25.

Atlantic, Ia.—The Rock Island Railway contemplates building a pumping plant in the near future.

Creston, Ia.—The present electric-light system is inadequate; improvements are to be made.

Essex, Ia.—Oscar Nelson has received franchise to build an electric plant.

Boyne City, Mich.—The village has given a franchise to O. S. Hayden and W. H. Selkirk for a gas plant; they will commence construction of same as soon as possible.

Pontiac, Mich.—Council has directed the City Attorney to take steps to annul the contract with the Pontiac Standard Lighting Company for street lighting on the grounds that the provisions of the contract have not been lived up to.

Louisiana, Mo.—The Louisiana Light and Power Company has petitioned for franchise to install an electric-light, street railway and heating system.—Arthur Ladley, promoter.

Frewsburg, N. Y.—A stock company is being organized for the purpose of establishing an electric-light plant to furnish electricity.—Wm. T. Rahn, President.

Middleville, N. Y.—The Middleville Electric-Light Company has been granted permission to increase its capital stock from \$4,000 to \$12,000, for the purpose of installing a new power house.—David E. Ford, President.

Sharon, N. Y.—Council is taking steps to build a municipal lighting plant, at a cost of \$50,000.

Fayetteville, N. C.—The Cape Fear Power Company will soon commence work upon the alteration of its large power plant at Buckhorn Falls; estimated cost, \$200,000.

Elyria, O.—The Deene Electric Company has been reorganized, with a capital of \$1,000,000; the capacity of the plant will be doubled, and new buildings will be erected.

Niles, O.—The Board has rescinded the contract for the new equipment for one engine, one generator, and one street light system with the Machinery Sales Co., of Cincinnati, and has decided to readvertise for bids.

Warren, O.—The Board of County Examiners has recommended the construction of a lighting plant for the county.

Hennessy, Okla.—The Hennessy Electric Light, Ice and Power Company has been organized, with a capital stock of \$15,000; a power plant will be erected at once.—Fred Ehler, President.

Scranton, Pa.—The Scranton Railway Company is preparing to expend \$500,000 for the erection of a new power house and other improvements; \$65,000 will be expended for the purchase of cars.

Sharon, Pa.—Council will recommend a \$40,000 bond issue for erecting a municipal electric-lighting plant.

Seneca, S. C.—The citizens have voted \$30,000 in bonds for establishing electric-light and water plant.—L. A. Edwards, Commissioner.

Bronte, Tex.—A company has been organized and is now building an electric plant.—Frank Hickman, President.

FIRE EQUIPMENT AND SUPPLIES

Hot Springs, Ark.—Council is arranging to build a fire station at Grand avenue.

Vallejo, Cal.—The engineer has completed plans for fire house.

New Britain, Conn.—Council recommends that a fire engine be purchased immediately.

Wilmington, Del.—The Board of Audit and Finance is considering proposition to consolidate Hook and Ladder Company on Dock street with Chemical Company, in new \$8,900 building which it proposes to build.—H. C. McQueen, Chairman.

Pella, Ia.—Council proposes to establish a fire alarm system.

Chicago, Ill.—Chas. F. Hermann has completed plans for the erection of two engine houses, one at Marshfield avenue and 45th street, and the other at Halsted street and 55th.

Rockford, Ill.—The Fire Department will be improved; the West End Fire Station will be equipped with apparatus, and a modern station will be erected in the Southeast end, and a new steamer purchased.

South Hadley, Mass.—The Town Board proposes to secure fire apparatus.

Highland Park, Mich.—Council has petitioned the Detroit Council to extend fire alarm boxes to the village.

Pingree, N. D.—The citizens have organized a fire company; it is proposed to purchase fire apparatus.

Cleveland, O.—Fire Chief Wallace recommends the erection and equipping of four new engine houses.

Springfield, O.—The Fire Chief recommends the purchase of 2,000 feet of hose to replace hose damaged by fire.

Easton, Pa.—Wise and Bailey, of Philadelphia, have been awarded contract through H. M. Gibson, to furnish 1,250 feet of "Bay State" fire hose, manufactured by the Boston Woven Hose and Rubber Company, Boston, Mass., f. o. b. Easton, at 80 cents per foot; warranted 72 months, 500 pounds pressure; other bidders were: Eureka Fire Hose Company, of New York, Paragon brand, 90 cents a foot, five years' guarantee; Macan Jr. Co., of Easton, Duplex A-1 brands, 75 cents a foot, guaranteed to withstand 400 pounds pressure for 48 months; Fabric Fire Hose Company, Deering brand, \$1 a foot, guaranteed to withstand 400 pounds pressure for five years, Keystone brand, 90 cents a foot, same guarantee.

Reading, Pa.—The Pioneer Hose Company has decided to erect a fire hall.

Franklin, Tenn.—A fire company has been organized at this place.—F. P. P. Henderson, Chief.

Jackson, Tenn.—Council has authorized issue of \$15,000 bonds for improving fire protection.

Dalhart, Tex.—Bonds have been issued for building a fire house.

Walla Walla, Wash.—Council has abandoned the proposition to build a combined fire hall and fire station; a separate fire station will be erected.

Rhineland, Wis.—Council has under consideration the improving of the fire protection and purchase of additional apparatus.

PUBLIC BUILDINGS

Hot Springs, Ark.—J. W. Golucke & Co., Architects, Temple Court, Atlanta, Ga., have plans for a \$100,000 school.

Milledgeville, Ga.—An election will be held to decide the question of issuing \$50,000 bonds for erecting a City Hall and improving streets.

Lafayette, La.—The School Board is preparing to issue \$18,000 school bonds.

Hattiesburg, Miss.—Council is considering the erection of a new City Hall, which will probably be on the same site as the old hall; cost, between \$60,000 and \$80,000.

Macon, Miss.—Bids will be received January 2, for the purchase of \$20,000 4½ per cent., 20-year Noxubee County jail bonds.—Address Z. T. Derrob.

Livingston, Mont.—Bids will be received January 15 by the County Board for the purchase of \$25,000 4 per cent. jail bonds.

Geneva, N. Y.—The issue of bonds for the erection of a City Hall is being considered.

Hornell, N. Y.—Council has authorized an issue of \$30,000 bonds for the erection of a Court House.

Middletown, N. Y.—R. T. Ford Company, of Rochester, was low bidder for furnishing two new boilers at the State Homeopathic Hospital, at \$6,667, and will probably be awarded contract; other bidders were Edwin Burhorn, of New York, \$7,488; Edward Joy, of Syracuse, \$7,900; Frank Dobson, New York, \$8,240; P. Delany & Co., Newburgh, \$8,990.—T. E. McGarr, Secretary, State Commission in Lunacy.

Chattanooga, Tenn.—The county is preparing to issue bonds for the erection of schools in St. Elmo, Richdale and East Chattanooga.

Jackson, Tenn.—Council has authorized issue of \$80,000 bonds for erecting an additional school house and \$15,000 bonds for improving the city Fire Department.

STREET RAILWAYS

Indianapolis, Ind.—The County Commissioners and the City Park Board have reached an agreement as to the plans for the proposed new Thirtieth street bridge over the White river, in Riverside park, and the Commissioners will proceed at once to advertise for bids; it will be concrete arch, with three spans, and will cost \$180,000.

Keokuk, Ia.—The Lee County Supervisors have granted franchise to L. Behr & Company, St. Louis, Mo., to build electric line through Lee county; the line will extend from Keokuk to Burlington.

Sioux City, Ia.—The Burlington Railway Company will build a draw bridge over the Missouri river at Sioux City, just below the Omaha bridge, instead of a high bridge.

Westville, N. J.—Improvements costing nearly \$500,000 are to be made to the electric line of the West Jersey and Seashore Railroad before the next summer schedule goes into effect; the directors have authorized the purchase of thirty-two cars, and it is proposed to greatly increase the capacity of the Westville power station.

Schenectady, N. Y.—The Schenectady, Marketsville, Hancock, and East Branch Railway Company has received a permit to build the Schoharie Valley line.

Chillicothe, O.—The Hillsboro, Bainbridge and Chillicothe Traction Company is being formed, with a capital stock of \$50,000; surveys are being made, and franchises are being secured.—George H. Smith, of Chillicothe, promoter.

Cleveland, O.—An ordinance is before Council to extend the electric lines of the Forest City Railway Company on several streets.—Fred C. Arber, Manager.

Findlay, O.—A company is being organized to build an electric road between Findlay, Tiffin and Norwalk; the road will be known as the Cleveland and Indianapolis Interurban Railway.—P. W. Ewing, Secretary.

Mt. Gilead, O.—At a meeting of the stockholders of the Delaware, Mt. Gilead and Gallon Electric Line it was decided to commence work on the road in the near future.

Oklahoma City, Okla.—The Oklahoma Railway Company has been incorporated, with a capital stock of \$5,000,000, by Frank Wells, G. G. Barnes, Carlos Holmes, of Oklahoma City, to build an interurban electric line covering a total of 170 miles, and connecting the principal cities in two territories.

Shawnee, Okla.—The local street railway will be extended a distance of three miles.

Scranton, Pa.—The Scranton Railway Company proposes to expend \$50,000 in improvements; \$75,000 will be spent in building the proposed Muggler street viaduct.

BRIDGES

San Diego, Cal.—Bids will be received for the erection of two bridges, one across Sweetwater river at the entrance of the steel cañon, and the other over the Cuyagaman and Eastern Railway at Alta station; the former to be 100 feet Howe truss bridge, with 260 feet of lineal approach; the latter bridge will be of reinforced concrete.

San Raphael, Cal.—The City Engineer was directed to prepare plans and specifications for the construction of a concrete bridge on H street, between Fourth and Fifth streets; estimated cost, \$2,000.

Darien, Ga.—The Georgia Coast and Piedmont Railway proposes to build a bridge across the Altamaha river, at a cost of \$100,000.—L. E. Emerson, Darien, Superintendent.

Sioux City, Ia.—The Burlington system has decided to build a bridge over the Missouri river in Sioux City; preliminary work will begin early next year.

Hutchinson, Ky.—Plans and estimates are being made for a new bridge over Cow creek, at Poplar street; Council is considering matter.

Covington, Ky.—The South Covington and Cincinnati Railway Company is interested in the construction of the proposed bridge across the Licking river.

Lafayette, La.—The Police Jury will advertise for bids for the construction of bridge across the Vermillion bayou.

Dayton, O.—The Montgomery County Board has been petitioned to build a bridge across Big Twin Creek near Farmersville.

Napoleon, O.—An appropriation of \$70,000 will be made to build bridge over Maumee river near Napoleon.

Springfield, O.—An appropriation of \$25,000 will be asked by the Board of Public Service for a bridge across Buck creek, connecting Sherman avenue and Nelson street; other bridges will be repaired.—Director William Sharon.

Toledo, O.—Council will probably direct the Directors of Public Service to build a new bridge over the canal at South avenue; cost, \$30,000.

Portland, Ore.—The East Side has formally started the campaign for a new steel bridge across the Willamette, to replace the Madison street bridge, which is nearing the end of its usefulness.

Norfolk, Va.—Plans have been prepared for two proposed viaducts crossing Newton creek.—W. F. Brooks, City Engineer.

Winnipeg, Man.—The Provincial Government has granted the request of Winnipes and St. Boniface for a grant of \$125,000 for the building and acquiring of a bridge communication between the two cities.

MISCELLANEOUS

Mobile, Ala.—The Commercial Printing Company has been awarded contract to print the city code at 93 cents per page.—Mayor Lyons.

Cairo, Ill.—The Comptroller has been directed to advertise for bids for removal of garbage and for city printing during the new year.—Mayor Parsons.

South Bend, Ind.—The Commissioners of St. Joseph county will offer for sale, January 17, \$270,000 3½ per cent. bridge and asylum bonds.

Ada, Minn.—Bids will be received, January 4, for \$5,000 village bonds.—Peter Watson, Village Clerk.

Hattiesburg, Miss.—Council has practically decided to issue \$175,000 bonds, of which \$60,000 will be expended for constructing a City Hall, \$25,000 for school buildings, and the remainder for constructing five steel bridges, extending the water and sewer systems, additional street paving, and for other purposes.—Dr. J. D. Donald, Mayor; A. Fairley, City Clerk.

Albany, N. Y.—Contracts for barge canal construction work have been awarded by State Superintendent of Public Works Franck, as follows: For bridge construction work on the Erie and Champlain canals, the United States Construction Company, for \$63,472, and for excavating the new enlarged canal near Minden, Montgomery county, to O'Brien and Hoolihan Contracting Company, Syracuse, for \$859,460.

Asheville, N. C.—The citizens have voted to borrow \$10,000 for erecting a city garbage crematory.

Cincinnati, O.—The purchase of 20 more street flushing machines has been recommended to the Board of Public Service.—J. S. Neave, Superintendent of Street Cleaning.

Akron, O.—Bids will be received, December 31, for the purchase of \$30,000 4 per cent. improvement bonds.—William A. Durand, City Auditor.

Springfield, O.—Council has authorized the purchase of flushing machines; the Board of Public Service has reached no decision as to the system to be adopted for cleaning streets.

Richmond, Va.—Council is considering issue of \$450,000 bonds for improvements.

Seattle, Wash.—The ordinance calling for bids on \$2,250,000 water bonds, \$2,250,000 sewer bonds, and \$60,000 park bonds has been drawn by the Corporation Council, and will be considered by Council.

Benwood, W. Va.—The matter of issuing \$50,000 in bonds for crematory is under consideration.

Milwaukee, Wis.—Council proposes to issue \$955,000 in bonds next year, as follows: \$1,000 South Side sewer bonds, \$50,000 street improvement, \$200,000 South Side viaduct, \$100,000 electric-light plant, and \$65,000 auditorium bonds.

DO YOU want to get into a road which you can make more money in laying than you can an, other; which has had a longer practical test as to its permanence than any of the modern roads are old, in its general construction; the validity of the special improvements of which has been corroborated by late experiments of the government at Washington? **Business getters only** are invited. **The Nash Road**, Borough of Brooklyn, New York City, U. S. A.

INCORPORATIONS

Chemical Gas, Heat, Light and Power Co., Kittery, Me.; machinery. Capital, \$1,000,000. President, G. B. Blodgett, Bowley, Mass.; treasurer, A. E. Knowlton, Boston, Mass., clerk, J. W. Hawes, Kittery, Me.

Flaming Arc Lamp Co., New York City; to manufacture arc lamps and electrical instruments. Capital, \$5,000. Incorporators: Mark L. Stone, 119 West 45th street; John Gray, 162 East 48th street; Moses Bellchick, 344 East 85th street, all of New York.

Frontier Gas Meter and Appliance Co., Niagara Falls, N. Y.; to manufacture gas meters, fixtures, etc. Capital, \$25,000. Incorporators: John Seymour, 1443 Niagara street, Buffalo, N. Y.; George M. Tuttle and Robert L. Rice, 48 Glinck Building, Niagara Falls, N. Y.

Twillingate Electric Co.; construction of public and private works. Capital, \$100,000. Incorporators: Ralph W. Strong, St. Johns, N. F.; John B. Lawrence and William N. Ingram, 5 Beekman street, New York; Patrick G. C'Hara, 302 Clinton street, Brooklyn; Hiriam Jordan, Gloversville, N. Y.

Underfeed Gas Producer Co.; to manufacture gas generators, lamps, etc. Capital, \$1,000. Incorporators: Royal C. Peabody, Lake George, N. Y.; George L. Nichols, Katonah, N. Y.; Walter E. Hope, 302 Cumberland street, Brooklyn.

United American Construction Co., New York City; building and constructing railroads, etc. Capital, \$50,000. Inspectors: Frank Hariden, Arthur Belmont, Ethel Harden, The Bronx.

Newark Gas and Electric Fixture Co., 225 Main street, East Orange, N. J.; electricians, mechanical engineers, suppliers of gas and electricity, etc. Capital, \$25,000. Incorporators: Charles L. Beck, Charles O. Geyer, F. C. Ferguson, as above.

New York Lekite and Construction Co., New York City; to manufacture tile, bricks and building materials. Capital, \$15,000. Incorporators: John T. McGovern and James G. Grigg, 141 Broadway, New York; Henry W. Buxton, Morristown, N. J.; George R. Swain, Newark, N. J.

North American Portland Cement Co., 15 Exchange place, Jersey City, N. J.; to manufacture Portland cement, plaster, artificial stone, building blocks. Capital, \$10,000,000. Incorporators: J. Rogers Maxwell, 78 Eighth avenue, Brooklyn, N. Y.; Henry Graves, Jr., Irving-on-the-Hudson, N. Y.; Alfonso de Navarro, 13 West 46th street, New York; Henry C. Traexler and Edward M. Young, Allentown, Pa.; Arnold F. Gerstell, Easton, Pa.; John B. Wight, Montclair, N. J.; Richard W. Lesley, Haverford, Pa.; John B. Lober, Bryn Mawr, Pa.; Ernest R. Ackerman, Plainfield, N. J.

Wheatley Hills Water Co., to supply water. Capital, \$25,000. Incorporators: Charles Crosby, 1 West 34th street, New York; H. P. Haas and Frank T. Leuinger, Pittsburgh, Pa., and others.

ATTENTION. PAVING BRICK MAKERS—Would like to hear from brick block paving companies who have no agent in Rochester, N. Y.; whose brick will stand the test of City Engineer; good business assured. Address Box 723, Rochester, N. Y.

GOOD OPENINGS for Managers familiar with machinery; write us to-day, stating experience; service strictly confidential; offices in 12 cities. Hapgoods, 305 Broadway, New York.

For Machines to Drill, Blast and Test Holes and Water Wells, write "LOOMIS CO., TIFFIN, O."

High Grades
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PURE ASPHALT

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California Asphaltum Sales Agency

San Francisco Chicago New York London
JOHN BAKER, Jr., Manager

PERSONALS

BAILEY, FRANK M., former Mayor of Jefferson, Ga., and who filled other local offices, has again been elected Chief Executive of the city.

BERNARD, CHARLES, Jr., Chief of the Fire Department of Madison, Wis., who has been in the service since 1871, has resigned, the same to take effect March 1; the position carries a salary of \$100 per month, which will probably be increased to \$125.

BRODERICK, JAMES C., Assistant Chief of the Fire Department of Detroit, Mich., succeeds Chief John Kendall, who retires January 1, after over forty years' service; John O'Neil, Chief of the First Battalion, becomes Assistant Chief of the Department; William H. Harris, promoted to Chief of the First Battalion; George J. Kelly, Chief of the Second; James W. Mathewson, Chief of the Third; Edward R. Dardis, Chief of the Fourth; William McGraw, Chief of the Fifth; T. E. Callaghan, Captain of Engine Company No. 8, Chief of the Sixth Battalion, and Frederick H. Roberts, Lieutenant of Hose Company No. 1, has been made Captain.

COLEMAN, JAMES S., builder of the new Croton dam, Street Cleaning Commissioner of New York City from 1881 to 1891, and one of the most widely known contractors in the country, died recently, aged sixty-three years. Mr. Coleman started the system of using city water commercially and cleared \$90,000 annually for New York on garbage disposal.

DE WITT, CHARLES, Civil Engineer of Port Clinton, Ohio, is making a preliminary survey for a sewer to be constructed in Put-in-Bay.

HARPER, E. A., City Engineer of Kansas City, Mo., is on thirty days' leave of absence, during which he will visit Cincinnati, Ohio, as well as points in Florida, and he will also investigate the system of drainage and street cleaning in Havana, Cuba, and will spend a short time with relatives on the Isle of Pines.

SERBONI, A., City Engineer of Narikaping, Sweden, is on a visit to America for the purpose of studying public works in municipalities.

SHAVER, HENRY L., and L. E. Sessions have been appointed by Mayor Archibald as Water Commissioners of Troy, N. Y., to succeed themselves.

SHERWARD, MORRIS R., City Engineer of Newark, N. J., and Prof. Charles McMillan, of Princeton University, have been retained by the Board of Managers as Consulting Engineers for the construction of the water supply system and sewage disposal plant for the new State Sanatorium for Tuberculous Diseases at Glen Gardner, N. J.

SMITH, CHARLES P., Mayor of Gadsden, Ala., recently went to Ludlow, Ky., to deliver to the First National Bank of that city \$15,000 of the \$30,000 sewer bonds which were previously purchased by the board through A. L. Rich & Co., bankers, of Cincinnati, O., who failed; the local banks advanced sufficient money to carry on the work and it is expected the contractors will be able to turn over the system to the city shortly after the first of the year.

STEEL, GEORGE H., of Hoboken, N. J., has gone South for a short vacation, and during his absence will work up his slate of appointments for the next year.

STONE, CHARLES H. H., has been appointed Chief Inspector of the New York State Gas and Electric Commission.

WELD, F. F., formerly with the Trussed Concrete Steel Company, of Detroit, Mich., has been made Engineer of the Reinforced Concrete Construction Company, of Pittsburg, Pa.

WHITE, MICHAEL J., was recently elected Mayor of Dover, N. H., defeating George J. Foster, who has been acting Mayor since the death of Mayor Pinkham, several weeks ago.

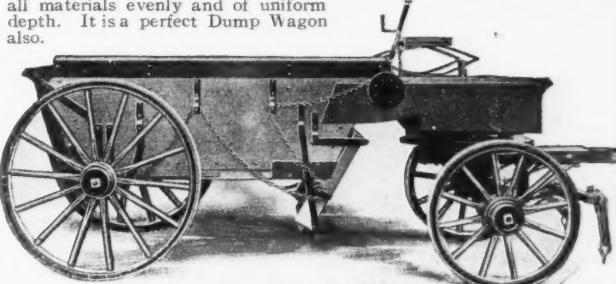
WOOD, ROSWELL L., will be inaugurated Mayor of Haverhill, Mass., January 1, for the fourth term, and Charles S. Ashley, ten times Mayor of New Bedford, Mass., assumes the reins of government, having defeated Mayor Thompson, who served two terms. Other cities in Massachusetts which will inaugurate are: Cambridge, Walter C. Wardwell; Chelsea, Edward E. Willard, reelected; Chicopee, Albert E. Taylor, reelected; Fall River, John T. Coughlin, reelected; Everett, Thomas J. Boynton, reelected; Lowell, Frederick W. Farnham; Lynn, Charles N. Barney, reelected; Somerville, Charles A. Grimmons, reelected; Northampton, Egbert I. Clapp; Worcester, John T. Duggan, reelected; Salem, Thomas G. Pinnock, reelected; Woburn, William E. Blodgett; Melrose, Eugene H. Moore; Holyoke, Nathan P. Avery, reelected; Malden, Dr. Charles D. McCarthy; Newburyport, Albert F. Hunt; Beverly, S. Harvey Dow; Medford, Clifford M. Brewer; Lawrence, John P. Kane, reelected; Fitchburg, James H. McMahon, reelected; Gloucester, George E. MacDonald, reelected; Waltham, John L. Harvey, Jr., reelected; Marlboro, Edward F. Brown; Springfield, William E. Sander-son; Taunton, John B. Tracy, reelected; Brockton, John S. Kent; Pittsfield, Allen H. Bagg, Jr.; Quincy, James Thompson, reelected.

WANTED

Copies MUNICIPAL JOURNAL AND ENGINEER dated January 3, 1906. 25 cents a copy will be paid for same.

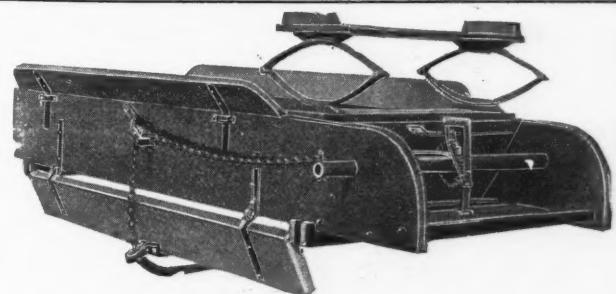
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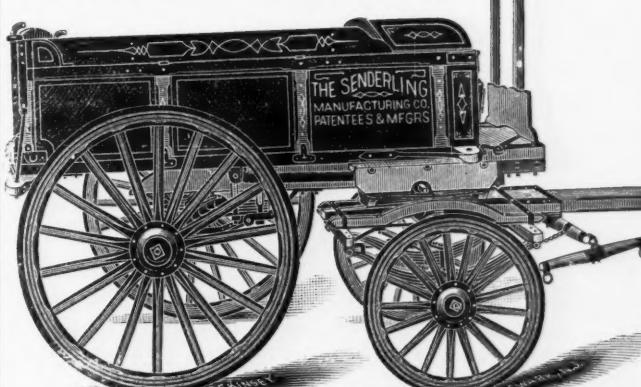
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TRADE NOTES

CONTRACTORS' SUPPLIES.—Henry J. McCoy Company, 65 Dey street, New York City, has just issued a handsomely printed and well arranged catalogue of supplies and equipment for contractors, mines, mills and railways. Each item is arranged alphabetically in an index, with page reference, while in the descriptive matter appliances of a similar kind are grouped. Pretty much everything made of iron, from steam shovels to garbage cans, is included in the list. The catalogue, however, is made particularly for the use of contractors.

WATERPROOFING.—The Electric Cable Company, 17 Battery Place, New York City, has recently placed on the market liquid "Voltax" compound. This material was used on the Armory of the Twenty-third Regiment, N.G.S.N.Y., in Brooklyn.

CAST IRON PIPE.—The Lynchburg Foundry Company, owing to increase in business, has found it desirable to increase its capital from \$350,000 to \$500,000. Less than five years ago this company had a capital of \$80,000 and employed only 60 men. Now it is doing a business of a million and a quarter dollars a year and is employing 500 men. In the pipe department alone the tonnage has been increased from 12 to 100 tons per day during the past four years. The Lynchburg Foundry Company owns and operates the McWane Pipe Works, the Radford Pipe Works and the Lynchburg Plow Works.

CREOSOTED WOOD.—The Wyckoff Pipe and Creosoting Company, Stamford, Conn., whose works are at Portsmouth, Va., manufactures conduits for underground wires and cables besides creosoting poles, railroad ties, wharf and bridge timbers. Referring to its creosoted conduits, the New York and New Jersey Telephone Company states that it has used 200 miles of telephone subway, some of it laid as early as in 1884, and a recent examination has shown no signs of deterioration.

ELECTRIC EQUIPMENT.—The General Electric Company, Schenectady, N. Y., in Bulletin No. 4446 describes its Remote Control Field Rheostats to be used with railway generators and rotary converters. Bulletin No. 4470 deals with the Electric Motor in saw mill work. Bulletin No. 4473 describes the G. E.—81 Railway Motor, which, while electrically identical with G. E.—54 motor, is designed so as to allow the bottom part of the frame to swing down into a pit for inspection.

GASOLINE TRUCKS.—The Knox Motor Truck Company, Springfield, Mass., manufacturers of Atlas trucks, issues a catalogue of its delivery cars and passenger conveyances. The back cover contains a cut of their Type B watering cart, built for the Metropolitan Park Commission, Boston, Mass.

NEW OFFICE.—The Power and Mining Machinery Company, Cudahy, Wis., in conjunction with the Snow Steam Pump Works, of Buffalo, N. Y., has opened a new sales office at 719 White Building, Buffalo, N. Y., where the several types of gas generating apparatus, such as the Loomis-Pettibone system, suction and pressure gas plants, built by the Power and Mining Machinery Company, and the Snow gas engines, built by the Snow Steam Pump Works, will be handled. Mr. Seward Babbitt, Sales Manager of the Power and Mining Machinery Company, will make his headquarters at the Buffalo office.

SPRAYOLOGY.—Mr. Howard Evarts Weed, M.S., Landscape Architect, 1715 Railway Exchange, Chicago, Ill., formerly Entomologist and Horticulturist Mississippi Experiment Station, publishes a handbook describing the best methods of suppressing the more common injurious insects and fungous diseases.

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PATENT CLAIMS

835,238.—Apparatus for Constructing Subaqueous Walls and the Like. Alfred J. Duccellier, Veneuil, near Chantilly, France. Serial No. 238,814.

The combination, with a caisson constituted by parallel upright walls, of a nose-section having side walls slideable along said first-named walls and open at its front portion to the passage of water, excavating mechanism mounted in said nose-section, and a compressed-air chamber in said caisson at the rear of said nose-section.

836,173.—Cast-Metal Pipe. Robert P. Barnstead, Boston, Mass. Serial No. 242,057.

Pipe-sections having each a female end provided with a plurality of helical threads each extending a semicircumference therein, and a male end formed with locking projections fitted to said threads, and provided with a packing filling the spaces between each male and female end.

836,211.—Road Filling and Leveling Device. William A. Pierce, Topeka, Kan. Serial No. 321,557.

In combination with a wagon, an attachment carried thereby adapted to engage the surface of the road to fill the ruts and level said surface, said attachment including a trailing chain, secured at one end to the rear portion of the wagon and projected laterally beyond one side thereof, and means for holding the chain in its laterally-projected position.

836,323.—Process of Sewage Disposal. John W. Keegan, Santa Rosa, Cal. Serial No. 272,926.

The improvement in processes of sewage disposal, which consists in maintaining substantial uniformity of anaerobic activity in an anaerobic bed by shifting the position of the region of defective anaerobic activity therein periodically.

Civil Service Examinations

Analyst.—Geological Survey.—The United States Civil Service Commission announces an examination on January 9-10, 1907, to fill a vacancy in the position of analyst or assistant analyst, U. S. Geological Survey, at \$1,400 to \$1,800 per annum. Apply to the U. S. Civil Service Commission, Washington, D. C., or to the Secretary of any Board of Examiners for Form 1312.

Civil Engineer.—The United States Civil Service Commission announces an examination January 3-4, 1907, to secure eligibles to fill vacancies in the position of civil engineer in the Philippine Service at \$1,400. Apply to the U. S. Civil Service Commission, Washington, D. C., or to the Secretary of any Board of Examiners for application forms 2 and 375.

Draughtsman.—The United States Civil Service Commission announces an examination January 9-10, 1907, to fill a vacancy in the position of topographic and cartographic draughtsman, at a salary of \$1,000 per annum. Apply to the U. S. Civil Service Commission, Washington, D. C., or to the Secretary of any Board of Examiners for application Form 1312.

Computer.—The United States Civil Service Commission announces an examination on January 9-10, 1907, to secure eligibles to fill a vacancy in the position of computer in the Coast and Geodetic Survey at \$1,000 per annum. Apply to the U. S. Civil Service Commission, Washington, or to the Secretary of any Board of Examiners for Form 1312.

Proposals

Pumping Engines

Muskegon, Mich., Dec. 11, 1906.

Bids will be received by the Water Committee, up to January 28, 1907, 12 o'clock M., to furnish the city of Muskegon, Mich., with new pumping engines (steam or electric power) of the following capacity: One six million gallon per 24 hours; one ten million gallon per 24 hours. Bids to be made separately on each capacity. Plans and specifications will be on file in the Water Works Office.

PAUL S. MOON,

Chairman, Water Committee.

WILLIAM DIXON,

Superintendent of Waterworks.

Sanitary Sewer System

Merchantville, N. J.

Sealed proposals will be received by the Mayor and Borough Council until 3 P.M., January 12, 1907, for the construction of a system of sanitary sewers. Certified check, \$3,000. Plans, proposal forms, etc., at office of borough clerk and at office of City-Wastes Disposal Co., Engr., 156 Fifth avenue, New York City.

A. W. MACCALLUM,

Chairman, Sewerage Committee.

Storm Water Sewer

Office of the City Clerk,

Wichita, Kansas, December 7, 1906.

Sealed proposals will be received at this office until 5 o'clock P.M., January 21, 1907, for the construction of the Wichita storm water sewer, No. 5.

The approximate amount of labor and material necessary for the construction of the above sewer will be mailed to bidders on application to this office. The estimated cost of the above sewer is \$318,000. All work necessary for the construction of the above sewer to be done under the direction and supervision of the City Engineer of the City of Wichita, and according to plans and specifications on file in his office. Bidders will be required to enclose certified check in the sum equal to 5 per cent. of the amount bid, as a guarantee of good faith. Bidders will be allowed to bid on the entire system or any part thereof. The Mayor and Council reserve the right to reject any and all bids.

R. N. DORR, City Clerk.

Power House, Head and Tail Race

Nanticoke, Pa.

Proposals will be received by the American Pipe Mfg. Company, 112 North Broad street, Philadelphia, Pa., up to January 15th, 1907, for the construction of a power house, head and tail race, etc., at Nanticoke, Pa. The right is reserved to reject any or all bids or to accept whichever bid that will be to their interest.

Electrical Subway System

West Point, N. Y.

Sealed proposals, in triplicate, will be received here until 12 o'clock, noon, January 5, 1907, for the construction of an electrical subway system, as per drawings and specifications in this office. The U. S. reserves the right to accept or reject any or all proposals or any part thereof. Forms and specifications furnished upon application. Address Quartermaster, West Point, N. Y.

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Crematory or Refuse Destroyer

Office of the President of the Borough of Richmond, Borough Hall, St. George, New Brighton, New York City.

Sealed bids or estimates will be received by the President of the Borough of Richmond at the above office until 12 o'clock m., on Thursday, December 27, 1906, Borough of Richmond.

No. 1. For furnishing plans for the foundations, building, runway, connecting flues and chimney of a refuse destructor to be built at West New Brighton, in addition to furnishing all plans, specifications, supervision, labor, materials and appurtenances necessary for the erection and completion of the furnace and steam boiler portion of the proposed West New Brighton destructor at West New Brighton, Borough of Richmond, the City of New York, U. S. A.

For full particulars, see "City Record."

GEORGE CROMWELL,

President.

The City of New York, November 16, 1906.

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THE BEST PIPE JOINTING MATERIAL
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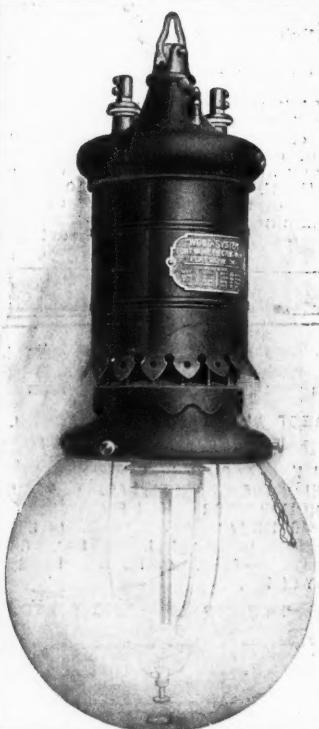
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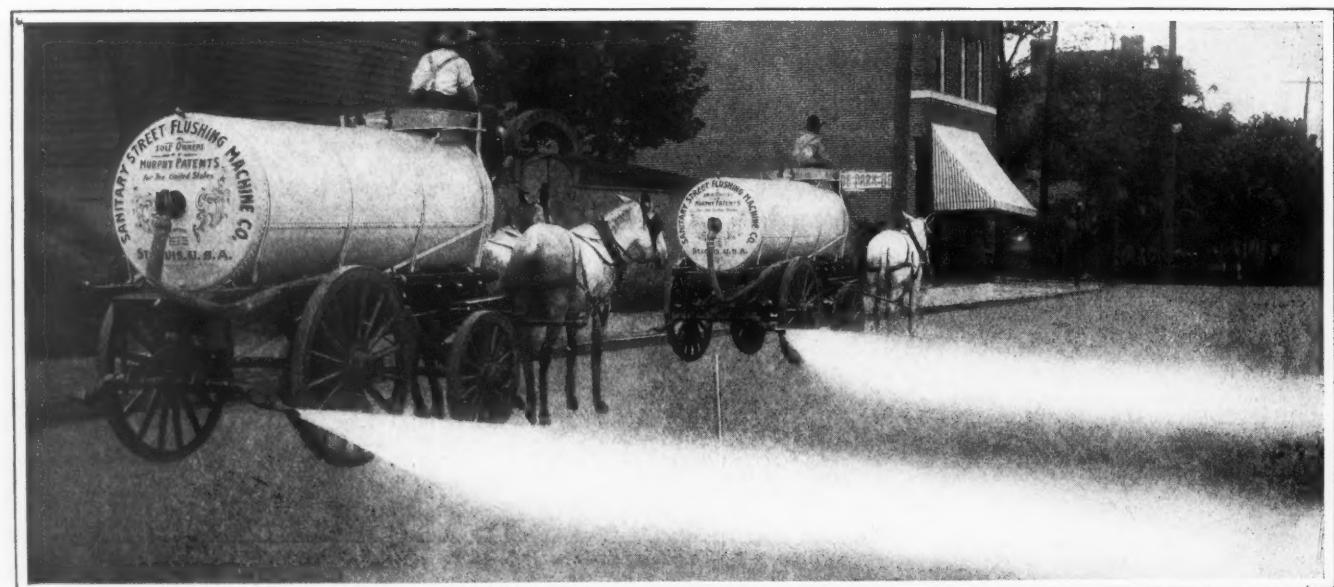
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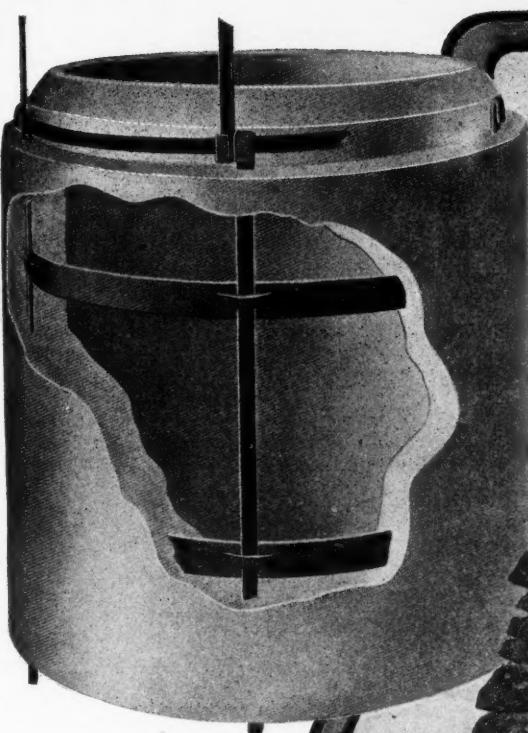
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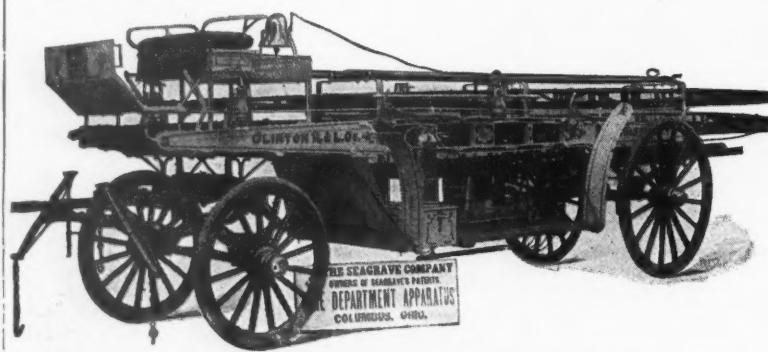
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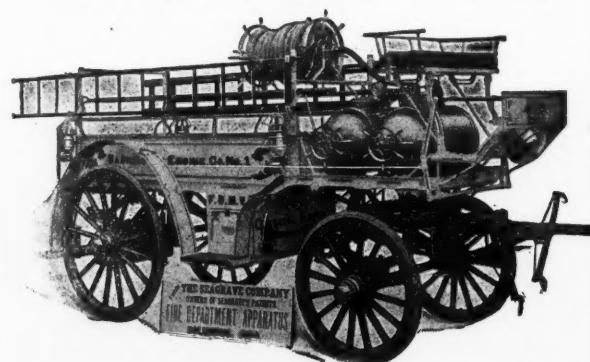
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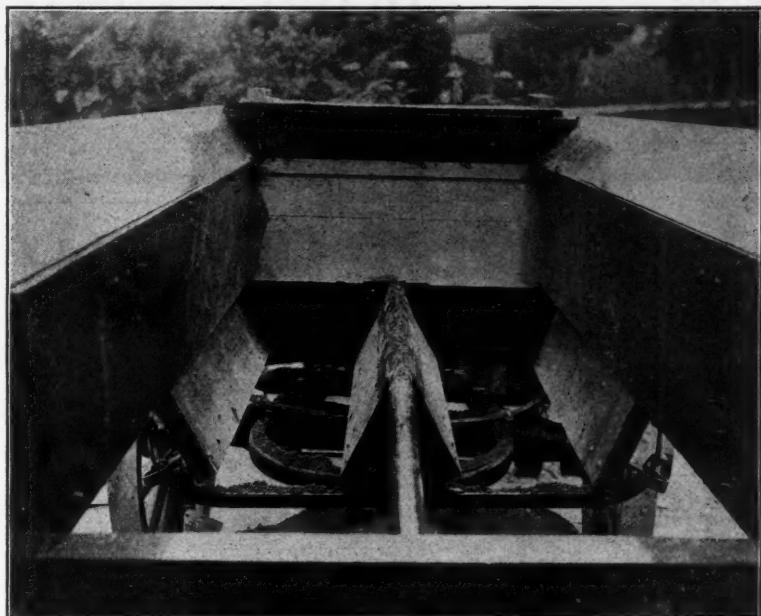
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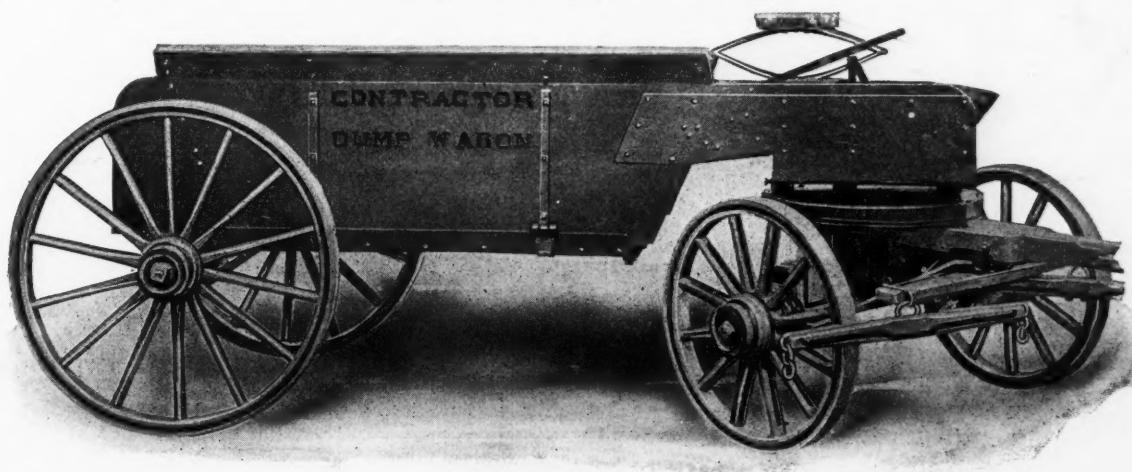
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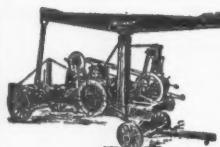
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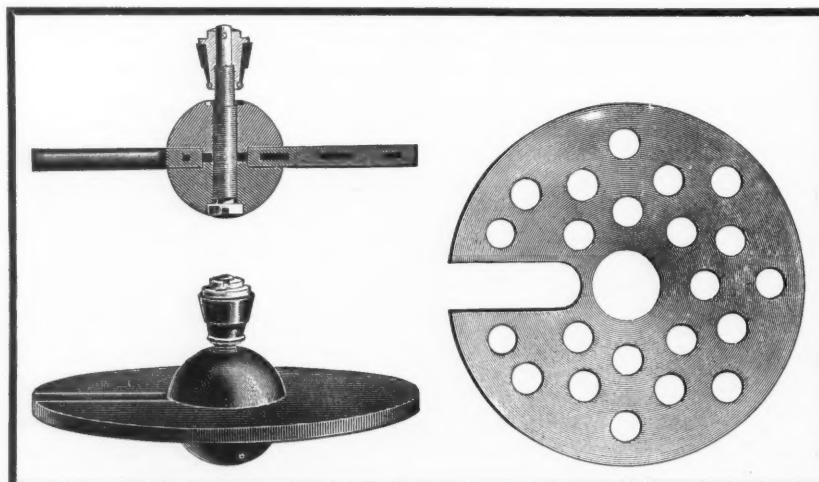
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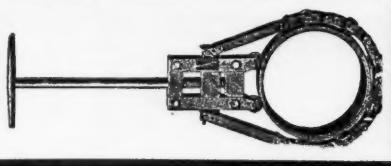
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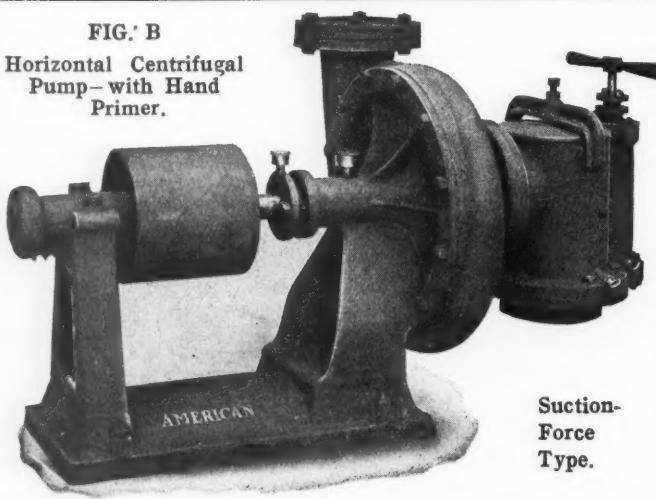
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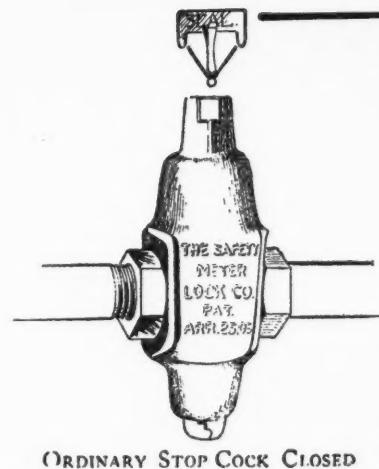
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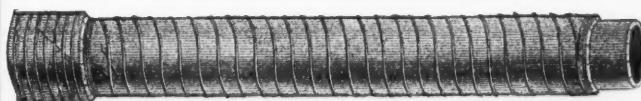
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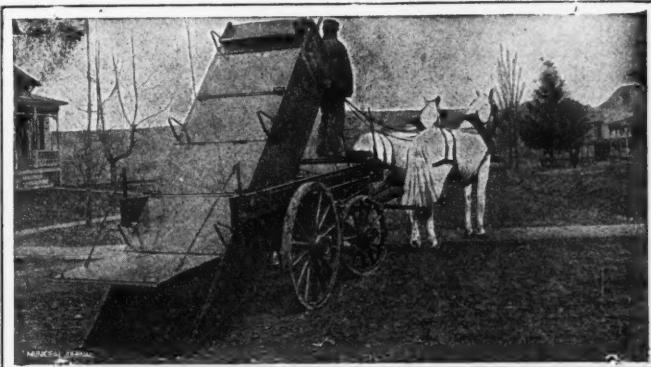
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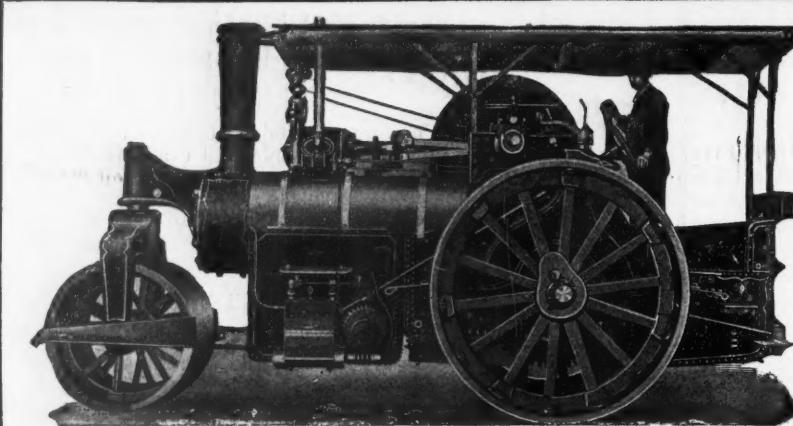
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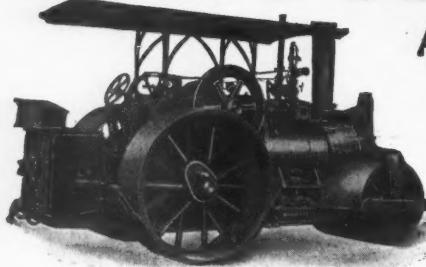
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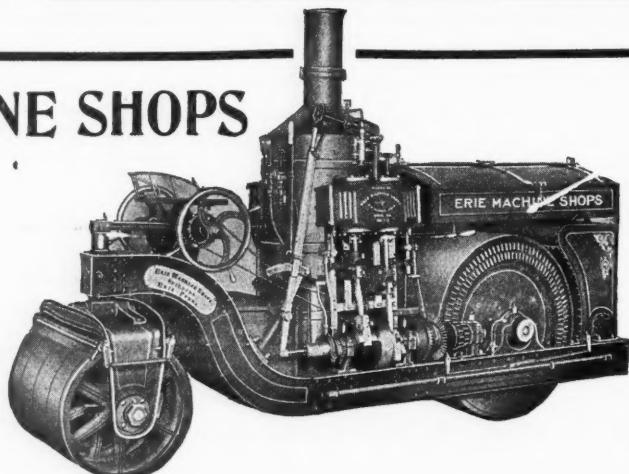
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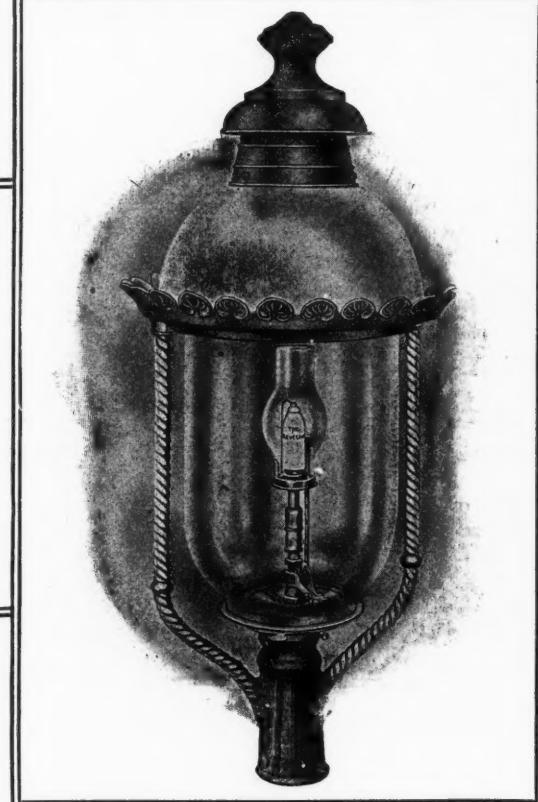
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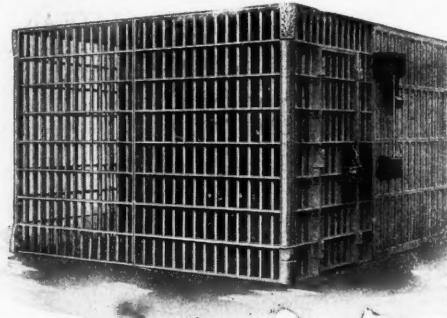
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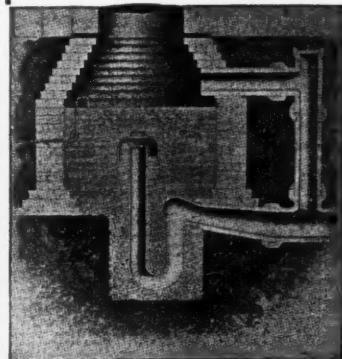
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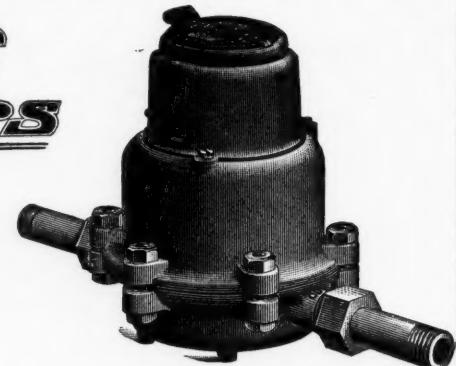
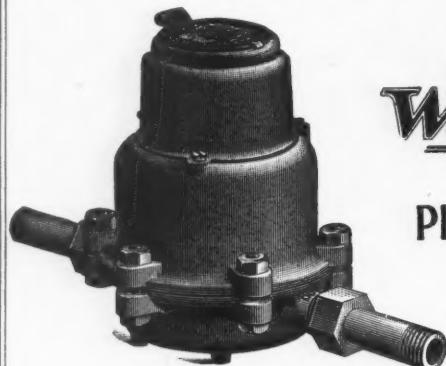
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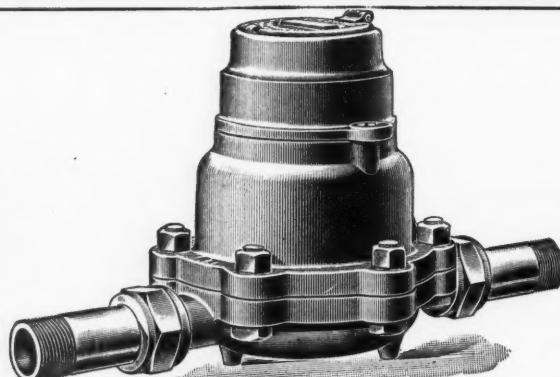
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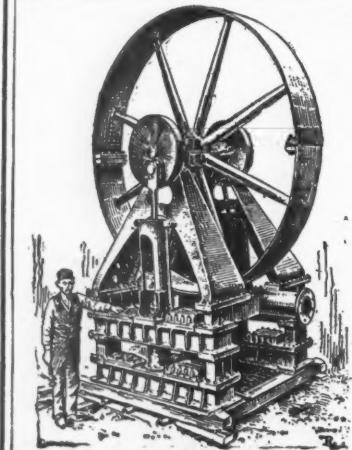
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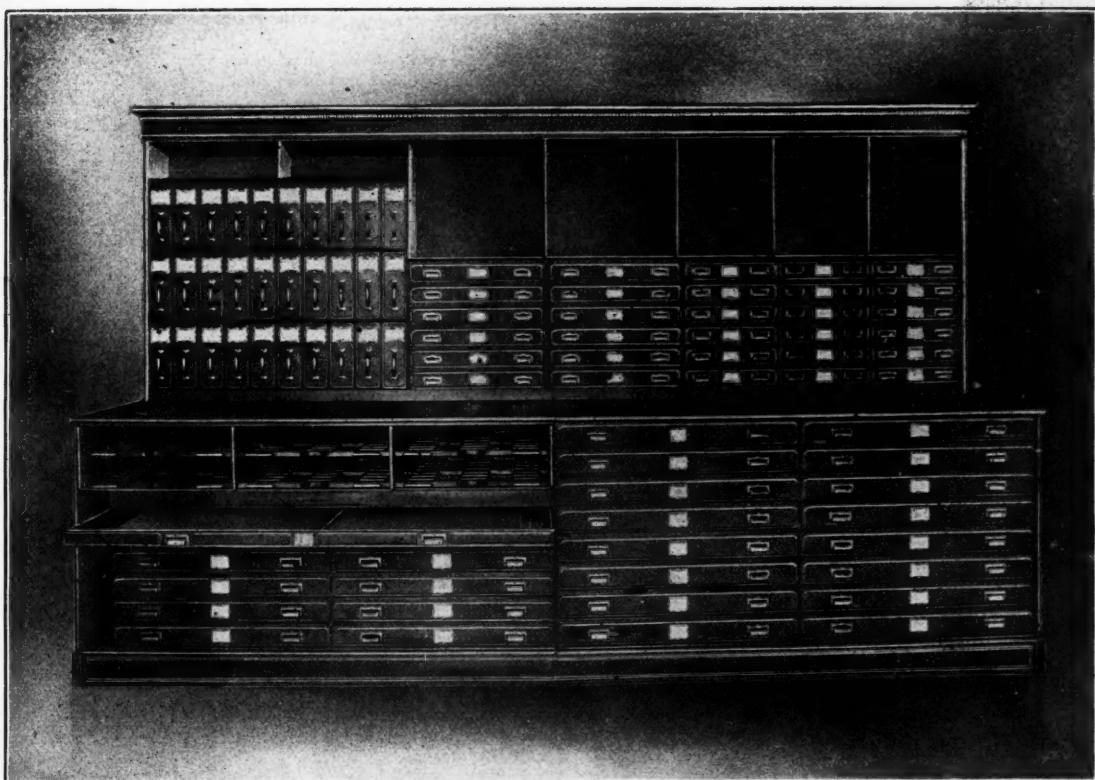


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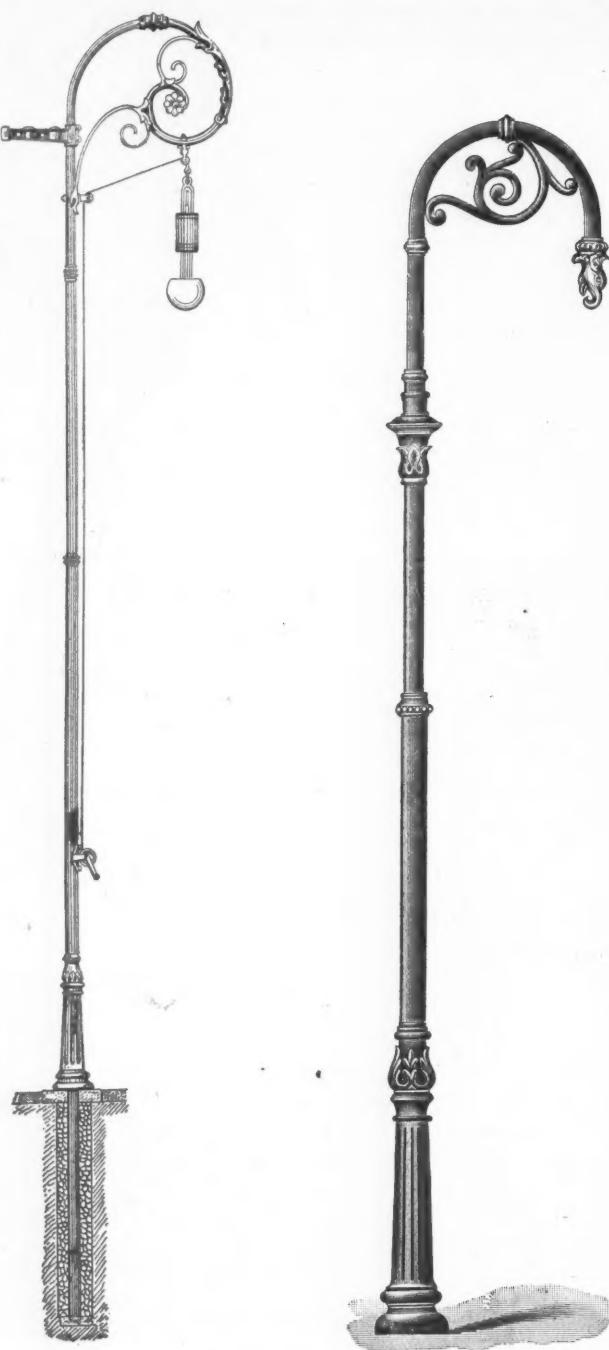
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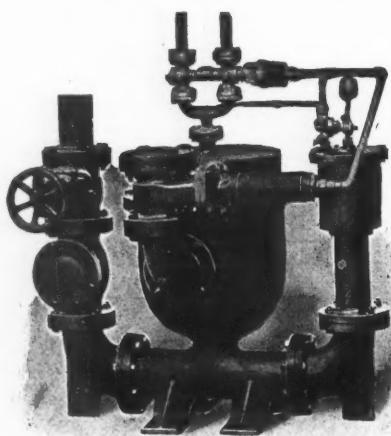
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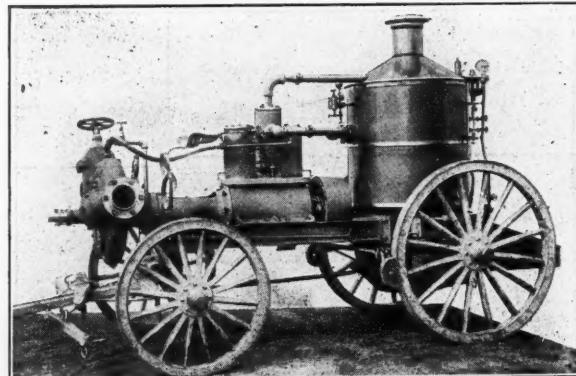
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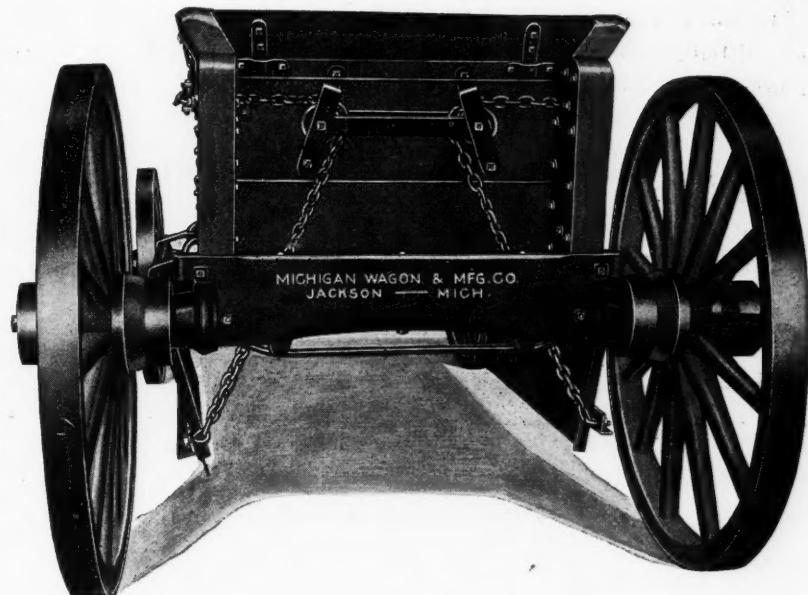
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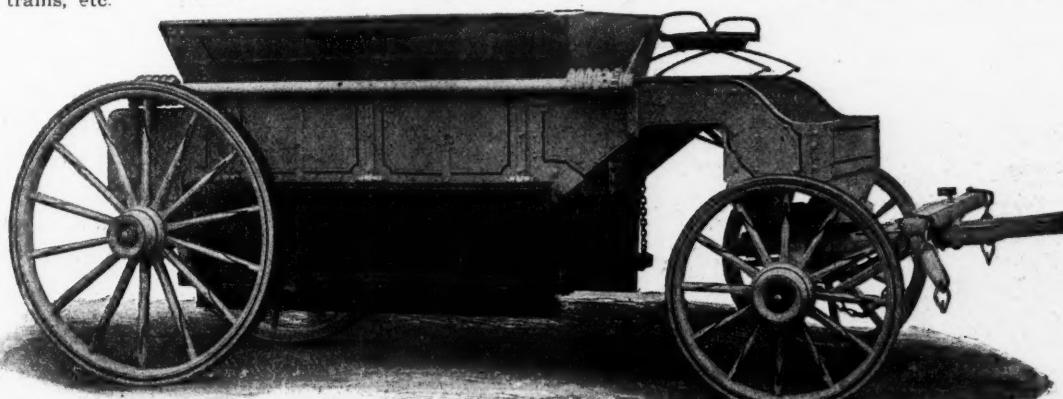
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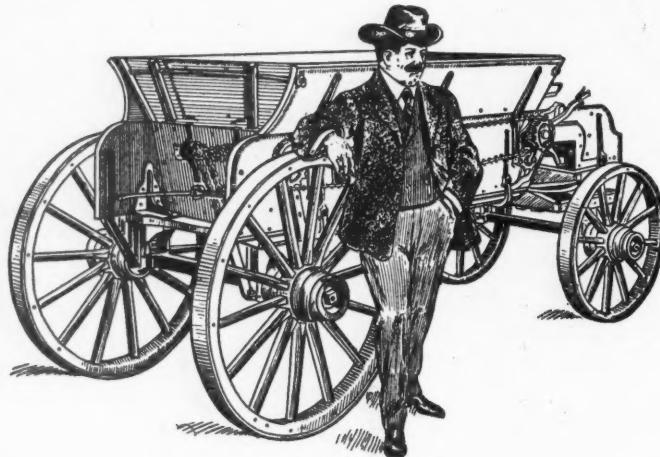
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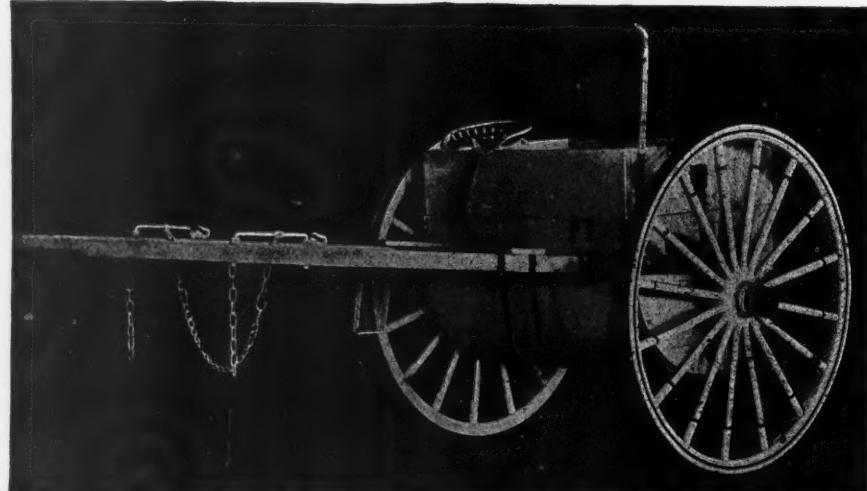
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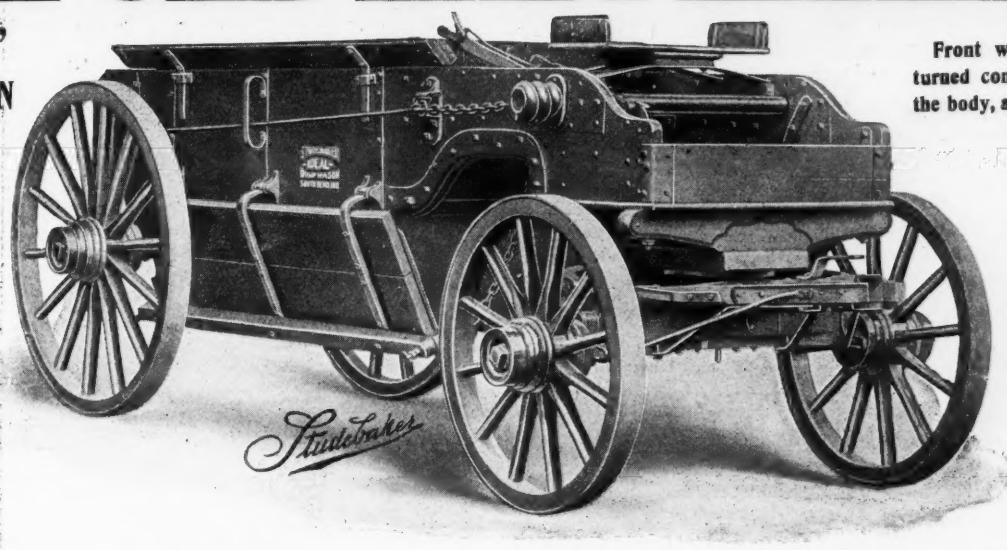
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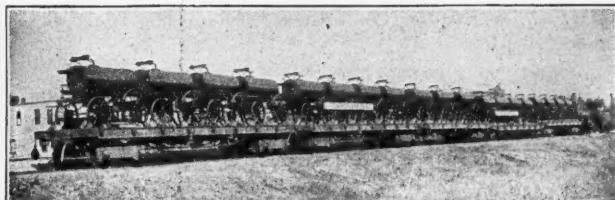
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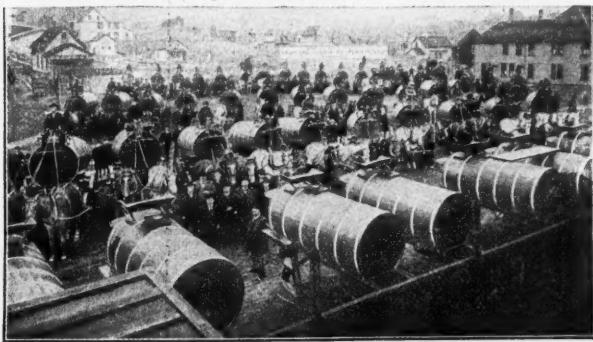
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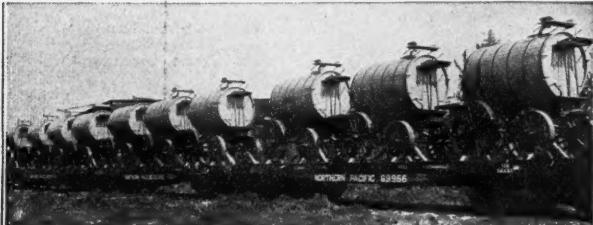
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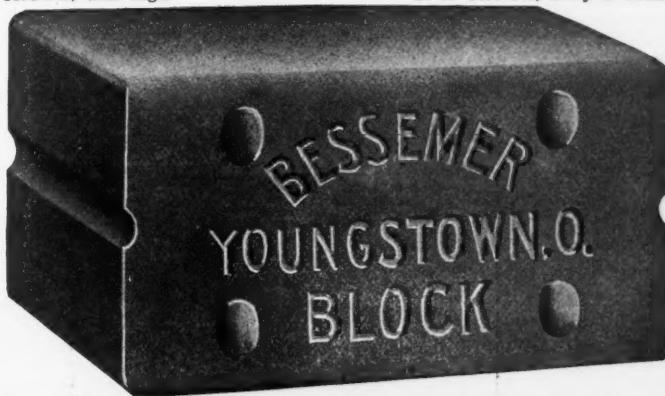
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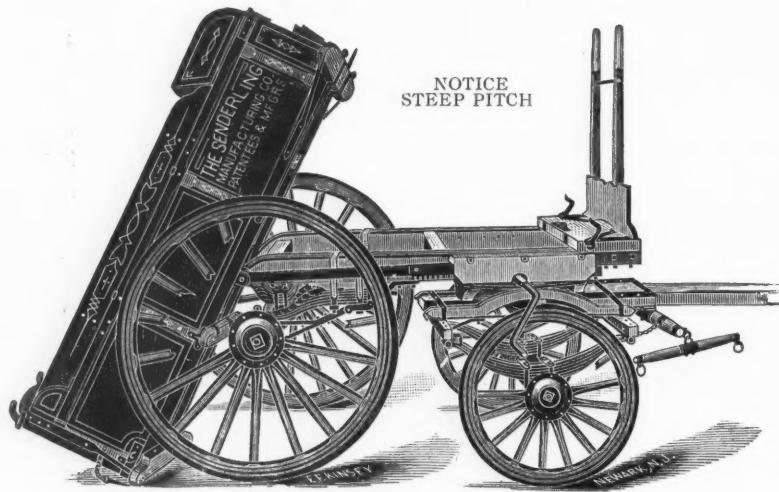
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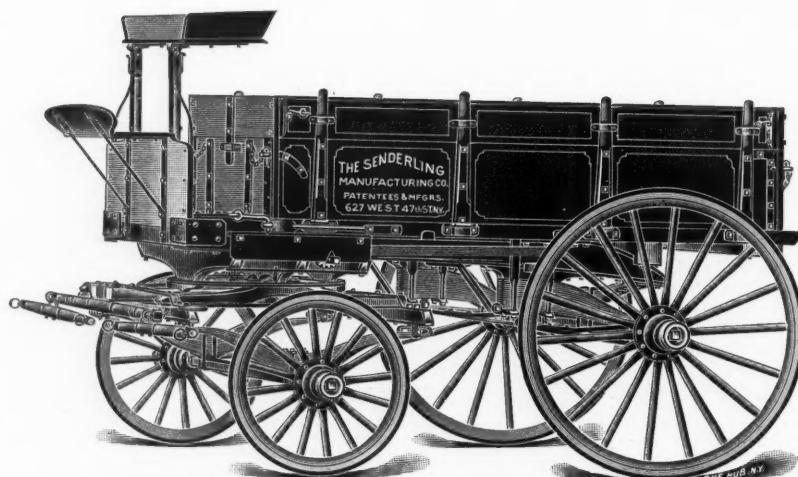


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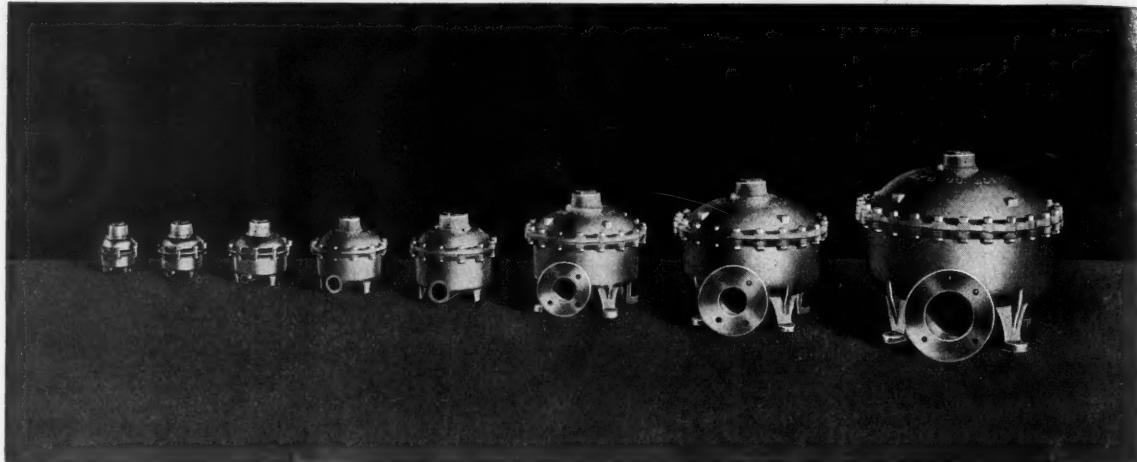
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